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BRONCHIAL ADENOPATHY IN CHILDREN

A survey and follow-up of 50 cases after measles
and
whooping cough.

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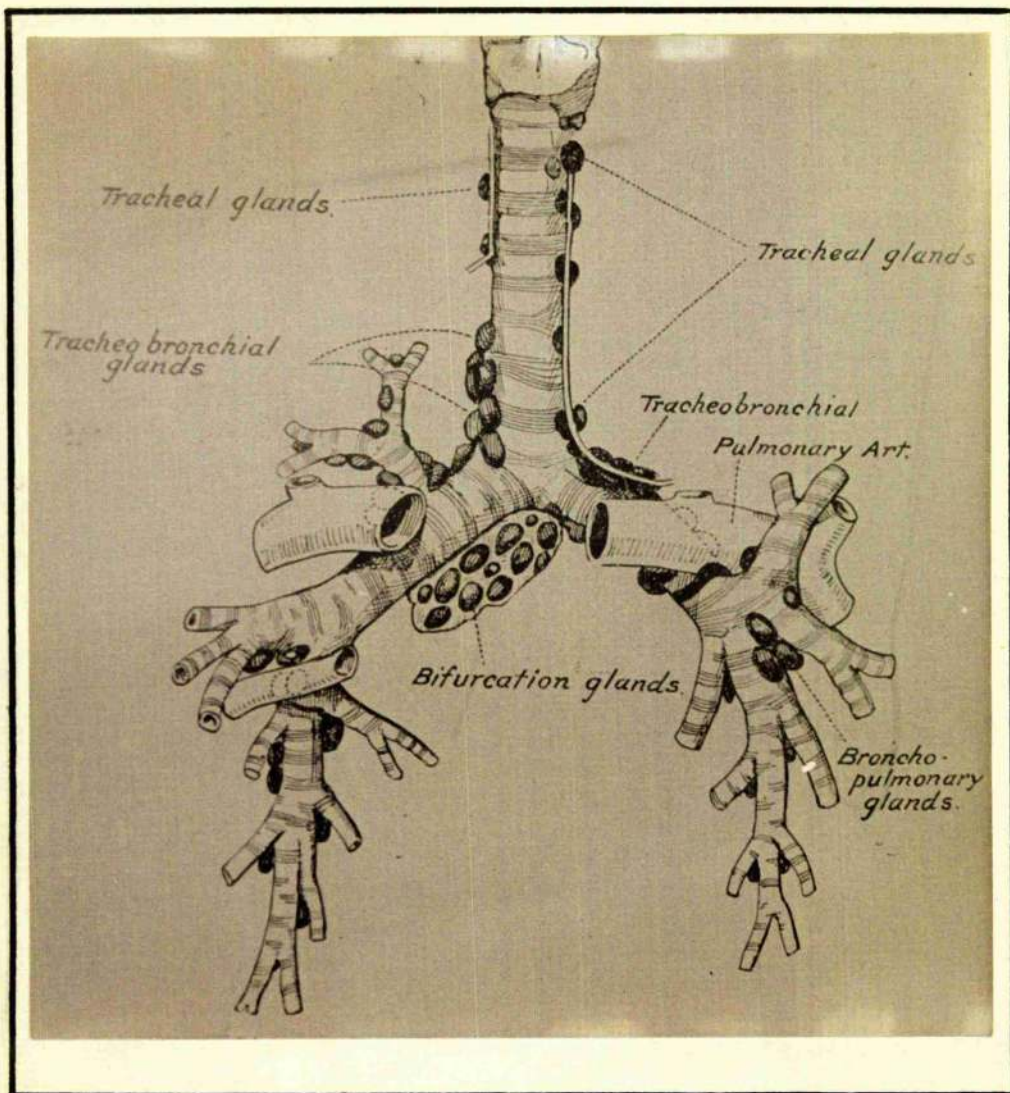
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— Lymph Nodes of the Tracheobronchial Tree —

(after Sukiennikow.)

INTRODUCTION

In the course of twenty years' experience in general practice, I have frequently been impressed by the large number of children whom I have seen during the autumn and winter, on account of recurring cough.

The chief complaint was cough, with or without constitutional disturbance, and with little, if any, expectoration. It tended to be more pronounced at night, especially after the child lay down in bed. When any upper respiratory infection supervened, the cough remained for a time after the other symptoms had cleared. In some cases it showed a paroxysmal character. On occasion, in these and in other cases there was a previous history of whooping cough or measles, or both.

On account of the frequency of the attacks, much school attendance was lost; and there was parental concern in some instances lest the recurring nature of the cough denoted some organic disease.

In the majority of the cases the physical signs were indefinite. Skiagrams frequently showed enlargement of the bronchial glands, with or without calcification. A few cases revealed primary tuberculous foci.

It is well known that the diagnosis of bronchial adenopathy from clinical signs and symptoms is often difficult, because of their vague character. Holt,⁽¹⁾ states - 'In order to produce signs, the mass of lymph nodes must be large enough to form a considerable mediastinal tumour, or be so situated as to produce pressure upon the trachea or bronchi.'⁽²⁾ Amberson, in Cecil's 'Medicine', further states - '.....physical examination usually is not helpful unless the mass is very large.'⁽³⁾ Still, referring to the diagnosis of tuberculous mediastinal glands, says - 'Is it possible to recognise the presence of enlarged glands in the mediastinum? I think that from certain symptoms and signs it is sometimes possible to diagnose this affection with at

least a high degree of probability.' He further states -
'.....there are two predisposing causes which play no small part in determining the heavy incidence of tuberculosis in early childhood; and keeping in mind the paramount necessity for more efficient prophylaxis, I wish to lay some stress upon these two potent factors in the aetiology of tuberculosis at this age : they are measles and whooping cough.....This very frequent occurrence of tuberculosis as a sequel of measles and whooping cough no doubt contributes to the special incidence of tuberculosis in infancy and early childhood.' He goes on to say - 'It seems likely that the catarrhal element in these two diseases is the particular predisposing cause of the subsequent tuberculosis, and one can well imagine that the swollen condition of the lymphatic glands in the mediastinum, which is a marked feature in some cases of whooping cough, and is also a common result of the pulmonary complications of measles, must favour the starting of a tuberculous process in them.'

These and other facts aroused my interest in the prognosis of bronchial adenopathy in childhood, especially as a sequela of measles or whooping cough. The correlated question of the probable incidence of tuberculous infection has also engaged my attention.

Since there appears to be little or no reference in the literature to follow-up work after measles and whooping cough, I resolved to attempt a survey, based upon personal investigation and long-term observation of fifty unselected cases in my practice; and, where possible, to standardise the clinical manifestations in which physical examination and radiographic findings have demonstrated the presence of bronchial adenopathy.

The cases included both whooping cough and measles convalescents, and a third group, who are classified as winter cough cases. The children in this group had suffered either from measles or whooping cough at some previous date - approximately within the previous four years - and were included in order to

demonstrate the late manifestations of the syndrome.

SCHEME OF STUDY

The following procedure was adopted in the investigation and for convenience the patients are arranged in three groups:-

- I. WHOOPING COUGH CONVALESCENTS (31 cases)
- II. MEASLES CONVALESCENTS (11 cases)
- III. WINTER COUGH CASES (8 cases)

In Group I, the initial investigation of cases was carried out between the fifth and sixth weeks of illness, except where complications had supervened. In Group II, uncomplicated cases were investigated between the second and third weeks of illness. In Group III, all were examined when cough was present. Each case was fully explored at the first examination. Subsequent findings were recorded at three months and six months, and thereafter at intervals of six months up to two years.

Heights were measured without shoes. Weights were taken on a standard balance, each child wearing pants only. Chest measurements and cyrtometer tracings were made at the level of the eighth dorsal spine. Skiagrams of the chest were taken at the initial examination, subsequently at three months and six months, and thereafter at intervals of six months.

The tuberculin patch test was carried out on all cases, because it is easily performed in children without causing pain or alarm. The Vollmer Patch Test material, supplied by Messrs. Evans, Sons, Lescher and Webb, was applied at the first examination, and thereafter at six-monthly intervals. Before applying the patch, the skin over the upper angle of the right scapula was thoroughly cleansed with ether and allowed to dry. After removing the gauze protection, the patch was applied and left for forty-eight hours. The test was read when the patch was removed and again after a further period of forty-eight hours. The latter reading was taken as the more accurate one. The Tuberculin Diagnostic Jelly, obtained from Messrs. Allen and Hanburys, was later applied at the sixth month - supplies

being difficult to obtain at the commencement of the investigations - and subsequently at intervals of six months. After the skin over the upper angle of the left scapula had been cleansed with ether, a small portion of the jelly was applied in the shape of a 'V', each side of which was half an inch long and covered with a piece of adhesive plaster one inch square. The control jelly was similarly dealt with, but the 'V' was inverted. To prevent the test jelly and the control jelly from running together a separate piece of plaster was applied over each of them. The plaster was removed in forty-eight hours and the result read simultaneously with the Vollmer test. A positive reaction to the tests was shown by an area of skin, corresponding in size to the tuberculin square of the Vollmer or the 'V' of the tuberculin jelly, being raised and red, with or without papules or pustules.

Both haematological and bacteriological examinations were made during the initial investigation of each case. The red and white corpuscles were enumerated and the haemoglobin content was estimated by the Sahli method. Leishman's stain was employed for blood films and also for the Arneeth Count.

Bacteriological examination included cultures on blood agar and Löffler's serum, from nasal swabs, throat swabs, and sputum, when available. After incubation these were examined after staining with Gram's stain. Attention was also given to the occurrence of haemolysis on the blood agar plates. Sputum was examined also for tubercle bacilli.

In view of a possible relationship between over-clothing and the occurrence of deficient thoracic expansion, predisposing to respiratory catarrh, the seasonal outfit of each child was charted and is submitted with its case record.

A graph showing height in inches and weight in pounds, at intervals of three months, was also prepared and is inserted in each instance.

From a survey of the literature of bronchial adenopathy, it appears that the condition was first recognised in the eighteenth century, since Baréty, as noted below ⁽⁶⁾, makes reference to kindred investigations of Lalouette (1780), Leblond (1824), Louiss (1825) and others. In these early days, however, the pioneer work was concerned with the anatomical and pathological rather than with the clinical aspects of the syndrome; and the greatest number of observations appear to have been made on tuberculous enlargement. Non-tuberculous infection received less attention.

⁽⁴⁾
Rilliet and Barthez, in 1842, discussing bronchial adenopathy, drew attention to the fits of coughing which were similar to those encountered in whooping cough.

⁽⁵⁾
In 1873 Gueneau de Mussy, taking up the question of the analogy between bronchial adenopathy and whooping cough, said - 'The cough, usually the consequence of bronchial adenopathy, is dry, obstinate, sometimes attended with a long whistling inspiration, as in whooping cough. This whooping cough-like character has been pointed out as belonging to the most advanced degree of this disease by all the physicians who have written on this affection. It may be observed in its mildest forms, and depends very probably on the connection of the enlarged glands with the pneumogastric nerve. I dare not assert that this peculiar character in whooping cough, is always the result of the enlargement of these glands; but I found all the signs proper to this condition in some cases of whooping cough, namely, in those which may be called chronic.' He proceeds further to say - 'Everybody knows that the cough may retain its character sometimes for several years; and, in a case of this description lasting for two years, I observed the physical signs of the bronchial adenopathy. I have noticed that the cough may disappear in some chronic cases although all the signs of the bronchial adenopathy have persisted.'

The bronchial glands were dealt with comprehensively and thoroughly in 1875 by Baréty⁽⁶⁾. His description is so complete that little could be added to his observations even to-day, and his original drawings show praiseworthy care and detail. He divides the glands which merit special attention into three main groups according to their order of importance.

(1) The right and left pre-tracheo-bronchial group.

(2) The right and left inter-tracheo-bronchial group or sub-bronchial group.

(3) The inter-bronchial group.

The pre-tracheo-bronchial group occupies the antero-superior side of the obtuse angle which is formed externally by the trachea and principal bronchus. The glands are situated on both sides, but hypertrophy and degeneration are found more commonly on the right side.

The inter-tracheo-bronchial or sub-bronchial group lie on the under surface of the main bronchus. They are more numerous on the right side than on the left side.

The inter-bronchial group occupy the angle of division of the bronchial tubes.

(7)

Eustace Smith, stated in 1875 - 'Children who have been subject to repeated attacks of pulmonary catarrh are very liable to enlargement and caseation of the bronchial glands. Whooping cough is also apt to leave behind it the same condition, and after measles it is frequently met with.' He pointed out that when the enlargement of the glands was marked, all the symptoms were the result of pressure signs, and the nature of the case was obvious. On the other hand at an earlier period, and before the enlargement had become sufficiently great to give rise to pressure signs, the diagnosis of the lesion was much less easy, as symptoms by which it was accompanied were few and obscure. Thus he states - 'If the child be made to bend back the head so that his face becomes almost horizontal and the eyes look straight upwards at the ceiling above him, a venous hum, varying in inten-

sity according to the size of the diseased glands, is heard with the stethoscope placed upon the upper bone of the sternum. As the chin is now slowly depressed the hum becomes less loudly audible, and ceases some time before the head is brought back again into the ordinary position.' I have employed this test in all my cases.

He further asserts - 'The explanation of this phenomenon I believe to be that the bending backwards of the head throws forward the lower end of the trachea which carries with it the glands lying in its bifurcation, and the left innominate vein, as it passes transversely behind the first bone of the sternum, is compressed between the enlarged glands and the bone... I believe the hum in the veins to be capable of being produced in every case where the glands of the chest are enlarged, so long as these are moveable. If they are fixed, and at some distance from the sternum, the experiment fails.'

(8)

In 1884, in his Textbook, he remarks - 'A small amount of pressure is sufficient in children to cause dilatation of the venous radicles of the chest, and the symptom is one of the earliest indications that the bronchial glands are larger than they ought to be.....When the pressure affects also the lower end of the trachea at its bifurcation there may be, in addition, attacks of dyspnoea. These are the ordinary 'asthmatic attacks' of young children.'

(9)

Voelcker, in 1895, when discussing the effects produced by caseous bronchial glands in children said - '.....a recognition of the importance of the glands, and the readiness with which they become the seat of tubercular deposit and subsequent caseation, should impress on us the danger of neglecting the vigorous treatment of pulmonary catarrh, especially of that form which follows on measles and whooping cough.'

In 1907, Professor Adolphe d'Espine described a method of examination for the early recognition of bronchial adenopathy and as I have used his method in all my cases I quote some of

(10)

his original observations. In one article he said that he had called attention briefly to this method of diagnosis in 1899 and that Professor Brouardel, in a communication made for him at the session of the Academy in November, 1904, said - 'Les premiers signes de l'adénopathie bronchique seul fournis exclusivement par l'auscultation de la voix et s'observent presque toujours dans le voisinage immédiate de la colonne vertébrale, entre la septième vertèbre cervicale et les premières vertèbres dorsales, soit dans la fosse sus-épineuse, soit plus bas, dans l'espace interscapulaire. Ils consistent dans un timbre surajouté à la voix, qu'on peut appeler chuchotement dans le premier stade et bronchophonie dans un stade plus avancé.....Il faut distinguer tout d'abord avec soin le retentissement exagéré de la voix de la bronchophonie..... Chez l'enfant normal, ce timbre cesse brusquement au niveau de l'apophyse épineuse de la 7^e cervicale.....Dans l'adénopathie bronchique, au contraire, entend le timbre bronchique dans un espace qui varie entre la 7^e cervicale et la 4^e ou 5^e dorsale.'

(11)

In a later communication he says - 'The special sign which permits us to diagnose the condition at an early period is based on the auscultation of the changes in the voice sounds at the level of the seventh cervical or first dorsal vertebrae..The sign is most obvious when one makes the child speak or count in a low voice. The voice is then accompanied by an added whispering sound localized to one or two vertebrae, or possibly extending to the fourth or fifth. A bronchial quality of the respiration at the same place has the same diagnostic value as the whispering sound.....It is the same with vertebral percussion.....a definite dullness at this level coincides invariably with a loud bronchophony, and is pathognomonic of the presence of a large glandular mass.' Again he says - '.....simple enlargement, as seen following measles, whooping cough and influenza, give physical signs less marked and more

ephemeral than those of tuberculous enlargement.'

(12)

Morse investigated the sign described by d'Espine and confirmed its value. To obtain the whispering sound he advises that the child should say 'Oh' or 'One'. He finds that percussion over the spinous processes also indicates the presence of enlarged glands in the mediastinum by extension downwards of the dullness, which should cease abruptly at the seventh cervical spinous process.

(13)

Frazer and MacRae, in a survey of the clinical evidence and radiological findings in cases of tuberculous broncho-adenopathy, call d'Espine's sign 'questionable'.

(14)

Carrol and Gibson, when referring to d'Espine's sign state - 'It is important to define the limits within which the sign is of significance. Transmission of the tracheal timbre is indicative of abnormality only when it occurs below the seventh cervical vertebrae in young children, below the second dorsal spine in children of eight and below the third or fourth in children of twelve to fifteen. The differences are due to the descent of the bifurcation of the trachea with increasing age. It must be emphasized also that the mere transmission of vocal resonance does not constitute d'Espine's sign. It is the transmission of the characteristic tracheal timbre which counts.'

(15)

Fleischner, in 1922, in his address from the chair to the Section on Diseases of Children at the Seventy-Third Session of the American Medical Association, St. Louis, chose as his subject 'Bronchial Lymphadenopathy, Non-tuberculous'. In a long and informative discourse he said - 'A careful survey of the literature bearing on the clinical signs of acute and subacute bronchial lymph node infections reveal the striking fact that it is extremely difficult to find records of observations sufficiently detailed to make a symptomatic diagnosis possible.'

He divides his cases into five groups:-

1. The malnutrition type. In which malnutrition is the cardinal symptom.

2. The subacute bronchitis type. In which frequent colds or persistent cough is the primary symptom.

3. The pertussoid type. In which a pertussis-like cough is the most striking event.

4. The chronic febrile type. In which a low grade febrile course is the essential complaint.

5. The asthmatic type. In which there have developed persistent attacks of asthmatic bronchitis following an acute respiratory infection, usually a pneumonia.

In order to justify his classification, he gives a detailed outline of the typical history and symptomatology in each group. He also deals fully with the physical signs including d'Espine's sign and finally states his conclusions which are as follows:-

1. 'Simple bronchial lymphadenitis, acute, subacute, or chronic, is a distinct clinical entity in childhood.

2. It may be divided into five definite types, based on the clinical history and cardinal symptoms: 1. Malnutrition type. 2. Subacute bronchitis type. 3. Pertussoid type. 4. Chronic febrile type. 5. Asthmatic type.

3. When one considers the great incidence of respiratory infection to which bronchial lymphadenitis is secondary, the general conclusion can be reached that this type of disease, in contrast to tuberculosis, is the most common disease of the bronchial lymph nodes.

4. The diagnosis must be made by a combined consideration of the history, physical signs and roentgen-ray interpretations.

5. The most important question for differential diagnosis is the possible presence of tuberculosis, which can be established by the use of tuberculin.

6. The treatment may be briefly summarized under three heads: rest, fresh air and diet.

7. With accuracy in diagnosis and careful observation in the details of treatment, the prognosis is invariably good,

unless a secondary infection takes place with the tubercle bacillus.'

(16)

In 1942, Kerley, when discussing Erythema nodosum in children, described the 'Occurrence of massive enlargement of the bronchial glands with diffuse infiltration of the lungs.' In my present series, however, none of the children suffered from this condition.

(17)

Paul, in 1943, when describing the radiological changes in children, states - 'In measles and pertussis a mild degree of hilum enlargement may be present. Again, in most instances, this is insufficient to be distinguished from the normal variations in the hila of children. When definite, the hilum shadows are enlarged symmetrically, the borders are fuzzy, and no smooth, discrete nodules can be identified.'

(18)

In 1944, Trail, dealing with mass radiography in the Royal Air Force says - 'As primary tuberculosis is usually regarded as being essentially a disease of children, one might expect that the incidence of calcification resulting from it would not alter appreciably in the different age groups of adult life. It will be seen, however, that generally speaking it rises as one progresses from the younger to the older age groups.....This rising incidence of evidence of a Childhood type of lesion can be explained in two ways. It may be that the incidence of childhood tuberculosis was more prevalent thirty to forty years ago than it was seventeen to thirty years ago, and consequently a larger percentage of the older age groups now show evidence of its results. An alternative explanation is that this type of lesion occurs in older individuals more frequently than is generally thought.'

Much has been written lately regarding 'Stethoscope versus x-rays' which tends I think to make one depend on the radiological findings rather than on a careful clinical examination.

(19)

Price, in her book 'Tuberculosis in Childhood', says - 'We have discarded one by one the older methods of diagnosis by

physical examination, because they have been found to be inaccurate since the use of x-rays has become universal.....We have to rely on the tuberculin test and radiology as in all primary infections.....History of contact and pressure cough and expiratory rattle, if present, help the diagnosis.'

We must not, nevertheless, under-estimate the importance of a careful clinical examination. To-day we are much inclined to overlook the investigations of the eighteenth and nineteenth centuries, forgetting pioneers whose knowledge, derived from painstaking observation, is a rich and stimulating source of clinical facts.

GROUP I

WHOOPING COUGH CONVALESCENTS

31 CASES

Case 1.

WHOOPING COUGH CONVALESCENT

Name. R.F. Sex. Male. Age. 3 years 2 months.

Date of Birth. 29/11/40.

Feeding. At breast for three months and thereafter fed on Ostermilk when lactation stopped.

Family History. Parents are alive and well. One sister aged five years is healthy. No family history of tuberculosis.

Previous Illnesses

Broncho-pneumonia	March, 1941.
Bronchitis	November, 1941.
Broncho-pneumonia	May, 1942.
Measles	November, 1942.
Whooping cough complicated by broncho-pneumonia	December, 1943.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept closed during the night. The mother, owing to her husband's addiction to alcohol, has to supplement income by teaching, and during the day the child is placed in the care of a neighbour. The child is, however, well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

January, 1944.

(3 years 2 months)

Height and Weight. 37.5 inches. 28 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids removed in November, 1943.

Naso-faucial Flora. Mainly staphylococci, pneumococci, streptococci and diphtheroid types.

Haematology.

Erythrocytes	5,130,000 per c.mm.
Leucocytes	23,000 per c.mm.
Haemoglobin 80 per cent.	Colour Index 0.77

Differential Leucocyte Count:-

Neutrophils	51.50 per cent.	(11,845 per c.mm.)
Eosinophils	0.25 per cent.	(57 per c.mm.)
Basophils	0.50 per cent.	(115 per c.mm.)
Lymphocytes	44.00 per cent.	(10,120 per c.mm.)
Monocytes	3.75 per cent.	(862 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	47	41	12	0	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5.75 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins over upper part of chest not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular, with prolongation of expiratory murmur. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. Cough and an occasional whoop present.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 1. 'Well formed chest. Heart shadow within normal limits.'

Right lung: Diffuse increase of root shadow, nodular in type, suggesting enlargement of hilar glands. Lung tissue generally shows slight increase of lung striation, more marked at base.

Left lung: Similar enlargement of root shadow with nodular enlargement more defined. Glandular enlargement more pronounced. Similar slight increase of normal lung striation.'

SUBSEQUENT EXAMINATIONS

At Three Months (April, 1944)

(3 years 5 months)

Height and Weight. 38.25 inches (increase of 0.75 inch). 33 pounds (gain of 5 pounds).

Physical Examination of Chest. No abnormality detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. A very occasional cough, especially after running.

Radiographic Findings

Plate 1 a. 'There is a definite improvement in the root shadows on either side, a diminution of the congestion and a disappearance of much of the periglandular inflammation. A few glandular masses are seen in the lung tissue adjacent to the hilar shadows in right lateral view.'

At Six Months (July, 1944)

(3 years 8 months)

Height and Weight. 39.75 inches (increase of 1.5 inches). 34 pounds (gain of 1 pound).

Physical Examination of Chest. No abnormality detected. D'Espine's sign was not elicited through non-co-operation of

patient. Eustace Smith's sign was absent. A very occasional cough, especially after running.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 1 b. 'Improvement continues. Some thickening of bronchial tree into base remains. Lateral view shows right posterior basal striation.'

In December the child had bronchitis and was in bed for two weeks.

At One Year (January, 1945)

(4 years 2 months)

Height and Weight. 40.5 inches (increase of 0.75 inch). 37 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight dullness over upper part of sternum. Breath sounds vesicular and harsh with scattered rhonchi, especially over the right half of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially in the early morning.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 1 c. 'Right lung: The root shadow remains somewhat diffuse with a mass of fairly firm central glands. There is a mass of small, well firm, upper bronchial glands. The lung fields show some generalised peribronchial congestion, especially basally.

Left lung: The root shadow shows a decided improvement with hardening of the glands along the upper lobe bronchi. There is a slight generalised peribronchial congestion.

Lateral view shows numerous small firm glands in central hilar area and also along the line of both anterior and posterior basal bronchi.'

In February the child had mumps followed by chickenpox.

At Eighteen Months (July, 1945)

(4 years 8 months)

Height and Weight. 42.25 inches (increase of 1.75 inches). 39 pounds (gain of 2 pounds).

Physical Examination of Chest. On percussion no abnormality was detected. Breath sounds vesicular and harsh with scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. A very occasional cough, especially in the morning.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 1 d. 'Decided improvement in the general appearance.

Both root shadows show much less congestion and the glands, particularly those along the upper lobe bronchi, right and left, show much better definition. In addition there is a marked improvement in the congestion previously noted around the right lower lobe bronchi. Lateral view confirms particularly the clearing of the basal congestion.'

In December the child had a mild bronchitis for ten days.

At Two Years (January, 1946)

(5 years 2 months)

Height and Weight. 43.75 inches (increase of 1.5 inches).
40.5 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Very slight enlargement of the anterior superficial veins over upper part of chest. On percussion no abnormality was detected. Breath sounds vesicular and harsh with a few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially in the morning.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 1 e. 'Compared with six months ago there is improvement in the quality of the root shadow, and reduction in the amount of peribronchial congestion then noted. Lateral view shows clearing of root congestion and hardening of glands, those along right lower lobe bronchi particularly.'

Compared with two years ago the root shadows remain diffusely enlarged but the congestion has disappeared. All gland shadows are small and firm. The lung striation is within normal limits save for some slight increase into right basal zone.'

CYRTOMETER TRACINGS

(one quarter natural size)

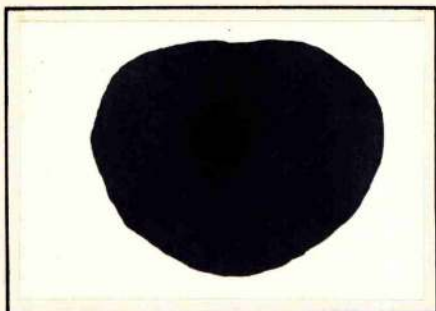


Fig. 1.

At First Examination

A-P. diameter 5.75 inches.
L. diameter 7.00 inches.

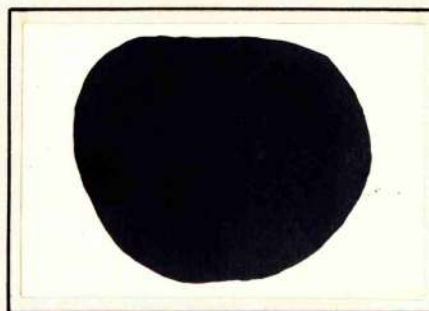


Fig. 1 a.

At Two Years

A-P. diameter 6.00 inches.
L. diameter 7.25 inches.

Circumference of Chest During Quiet Respiration

20 inches.

22 inches.

(Male. 3 years 2 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool		

Shoes and stockings.

Sandals and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Shirt	Cotton
Trousers	Flannel	Trousers	Flannel
Coat	Tweed		
Pantaloon	Velvet		
Scarf	Wool		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

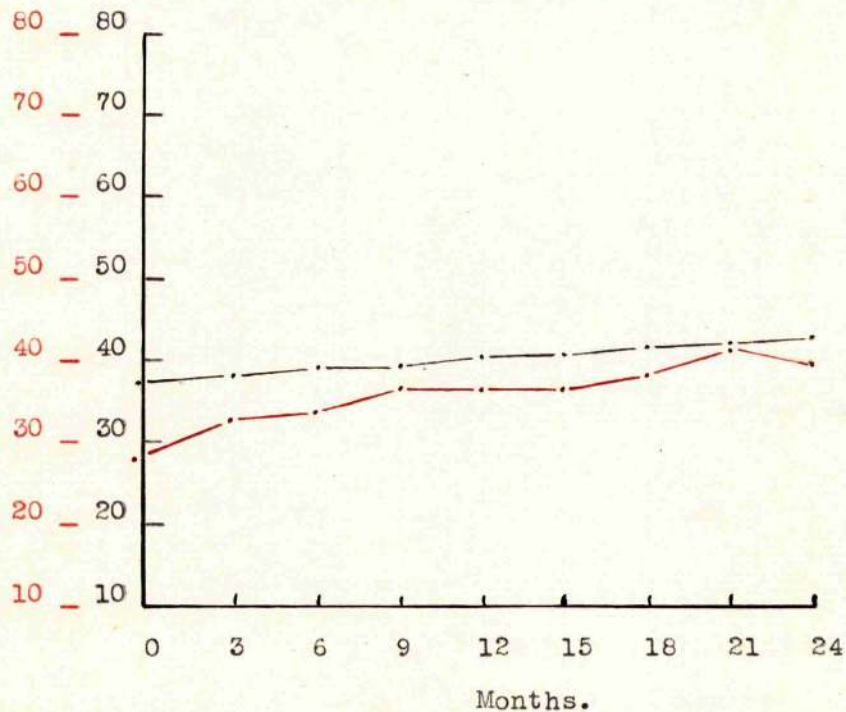
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



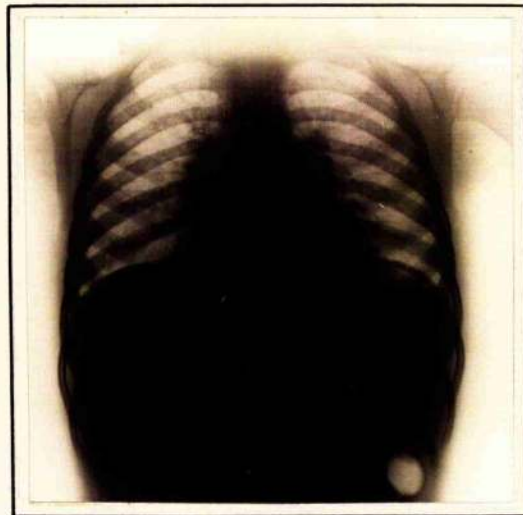


Plate 1. At First Examination.

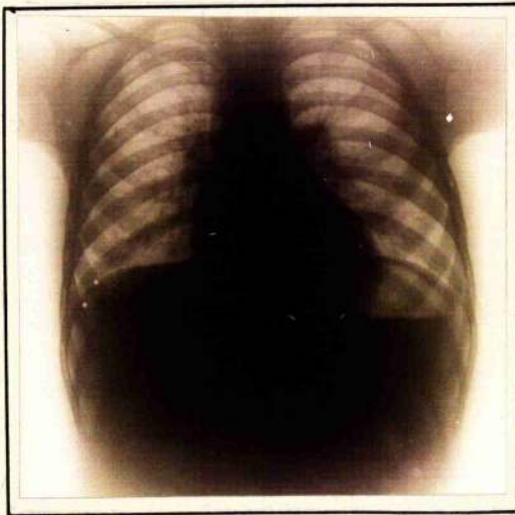


Plate 1 a. At Three Months.

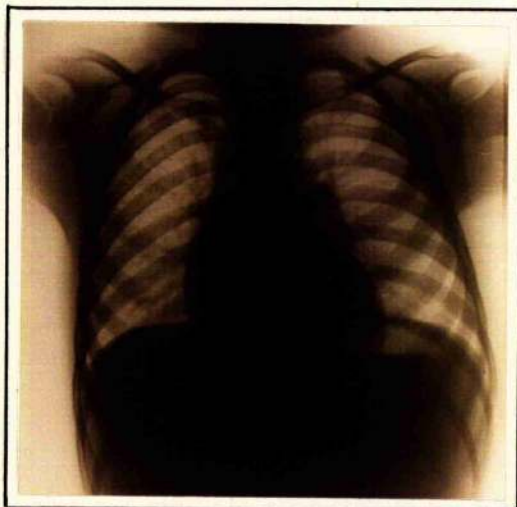


Plate 1 b. At Six Months.

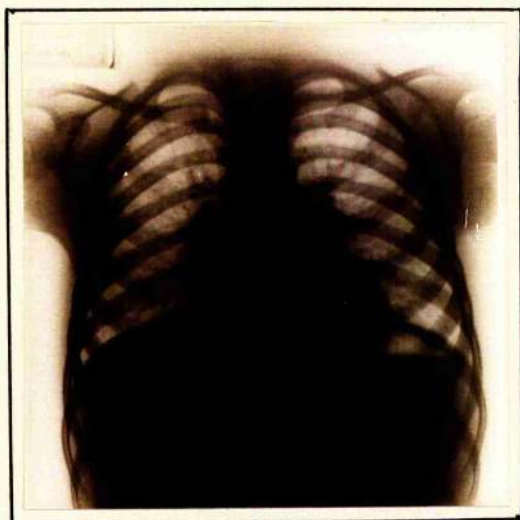


Plate 1 c. At One Year.

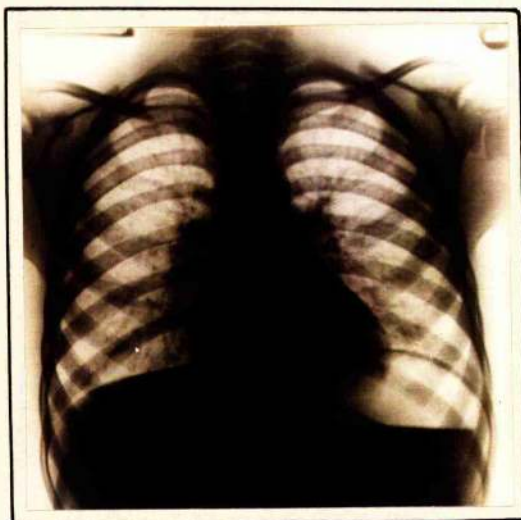


Plate 1 d. At Eighteen Months.

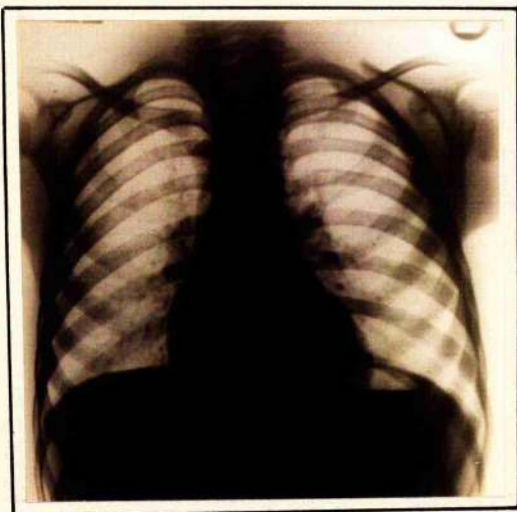


Plate 1 e. At Two Years.

Name. G.B. Sex. Female. Age. 7 years 6 months.

Date of Birth. 14/9/36.

Feeding. At breast for three months and thereafter fed on Sister Laura's Food when lactation stopped.

Family History. Parents are alive and well. Two brothers, aged ten and a half, and four and a half years, are healthy. No family history of tuberculosis.

Previous Illnesses

Acute otitis media of left ear July, 1937.
Whooping cough January, 1944.

Environment and Parental Care. The family resides in a self-contained house on the outskirts of a town. The bedroom windows are kept open day and night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(7 years 6 months)

Height and Weight. 47.75 inches. 53 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 654321 123456
Teeth in lower jaw: -54321 123456
Total number of teeth: 23

Ear, Nose and Throat. No discharge from ears. Drums are normal and hearing is perfect. No nasal discharge. Tonsils and adenoids removed in April, 1939.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci (*aureus*), streptococci and diphtheroid types.

Haematology.

Erythrocytes 5,310,000 per c.mm.
Leucocytes 9,000 per c.mm.
Haemoglobin 90 per cent. Colour Index 0.84

Differential Leucocyte Count:-

Neutrophils 53.25 per cent. (4,792 per c.mm.)
Eosinophils 1.00 per cent. (90 per c.mm.)
Basophils 0.25 per cent. (22 per c.mm.)
Lymphocytes 39.75 per cent. (3,377 per c.mm.)
Monocytes 5.75 per cent. (517 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	12	38	40	9	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 23.5 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 8 inches. Skin texture fine. Enlargement of anterior superficial veins over upper part of chest not noted. No enlarged glands. Percussion note clear.

Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough present.

Bacteriological Examination of Sputum. A mixed flora including pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 2. 'Chest regular and symmetrical in outline. Heart shadow within normal limits.

Right lung: Diffuse enlargement of root shadows showing exaggeration of bronchial tree into all zones of the lung and with some small nodular bronchial glands.

Left lung: Thickening of bronchial shadows with consequent diffuse enlargement of hilar shadow; basal extension of striation. Calcification of left tracheo-bronchial glands and striation extending upwards therefrom into subapical zone.

Lateral view shows generalised increase in hilar shadows with numerous enlarged glands throughout.'

SUBSEQUENT EXAMINATIONS

At Three Months (June, 1944)

(7 years 9 months)

Height and Weight. 48.25 inches (increase of 0.5 inch). 54 pounds (gain of 1 pound).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. A very occasional cough, especially after running.

Radiographic Findings

Plate 2 a. 'Less reaction around glands which are all smaller and firmer. Lung striation remains unchanged.'

At Six Months (September, 1944)

(8 years)

Height and Weight. 48.75 inches (increase of 0.5 inch). 55 pounds (gain of 1 pound).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 2 b. 'Definite improvement in appearance of lungs. Some basal striation remains, but the lung fields are much

clearer than in June. The root shadows are slowly diminishing in extent. The lateral view shows this particularly well.'

In December the child had a cough for two weeks, especially after lying down in bed at night.

At One Year (March, 1945)

(8 years 6 months)

Height and Weight. 49.75 inches (increase of 1 inch).
59 pounds (gain of 4 pounds).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 2 c. 'On the whole there seems to be no improvement in the year's films. There is rather more congestion in the root shadows, and the peribronchial congestion into right upper, right basal and left basal zones is more marked in the present film than in that of one year ago. The glands show little change.

Lateral view shows no definite change.'

In March the child had german measles and in April she had pharyngitis.

At Eighteen Months (September, 1945)

(9 years)

Height and Weight. 50.5 inches (increase of 0.75 inch)
60 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of the anterior superficial veins over upper part of chest. No abnormality detected from percussion or auscultation. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 2 d. 'When compared with antero-posterior film of March, 1945, little change is to be noted. Lateral view however, shows a definite diminution in the peribronchial congestion generally.'

In January the child had influenza.

At Two Years (March, 1946)

(9 years 6 months)

Height and Weight. 51.5 inches (increase of 1 inch).
64 pounds (gain of 4 pounds).

Physical Examination of Chest. Very slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 2 e. 'As compared with six months ago there is no change in the antero-posterior film. Lateral view shows slight diminution in extent of the root shadow.'

As compared with two years ago the present film shows little change in the root shadows and in the increased lung striation.

Lateral view does show a slight diminution in extent of root shadow, but gland shadows remain unchanged.'

CYRTOMETER TRACINGS

(one quarter natural size)

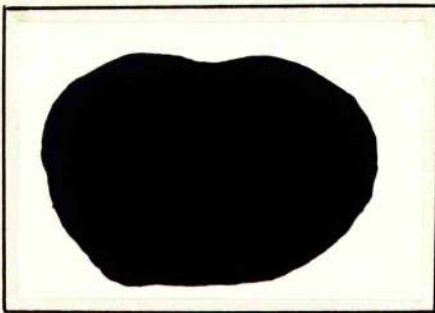


Fig. 2.

At First Examination

A-P. diameter 5.50 inches.
L. diameter 8.00 inches.

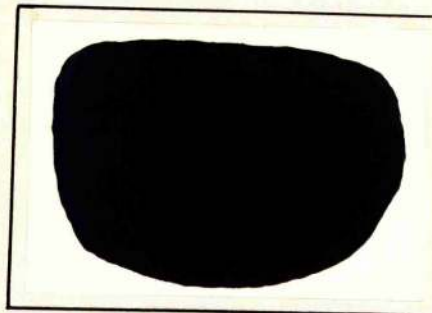


Fig. 2 a.

At Two Years

A-P. diameter 6.00 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

23.50 inches.

25.00 inches.

(Female. 7 years 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Knickers	Wool	Knickers	Cotton

Shoes and socks.

Sandals. No socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Skirt	Flannel	Frock	Cotton
Jumper	Wool		
Coat	Tweed		

No hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

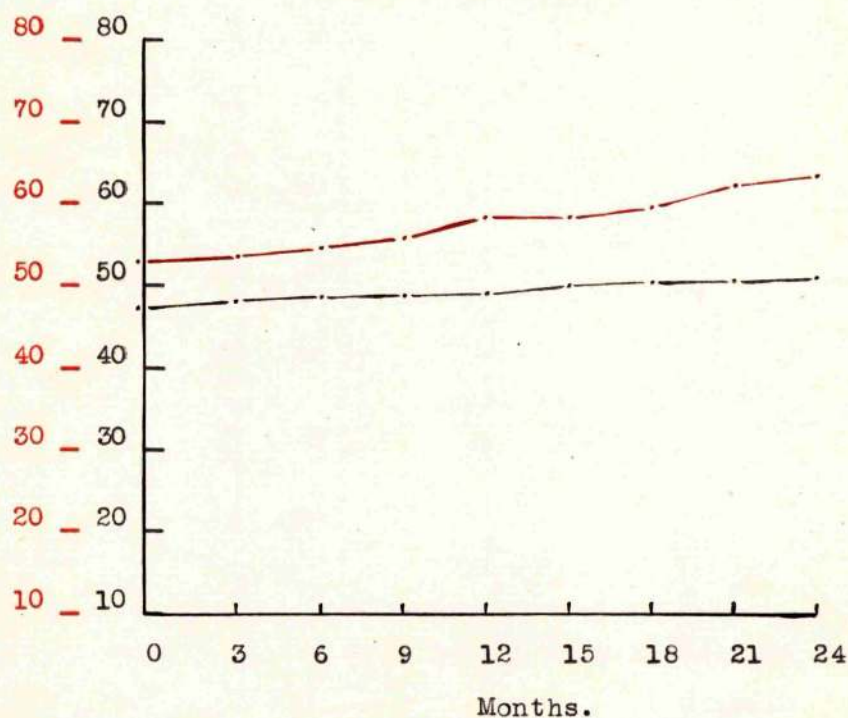
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



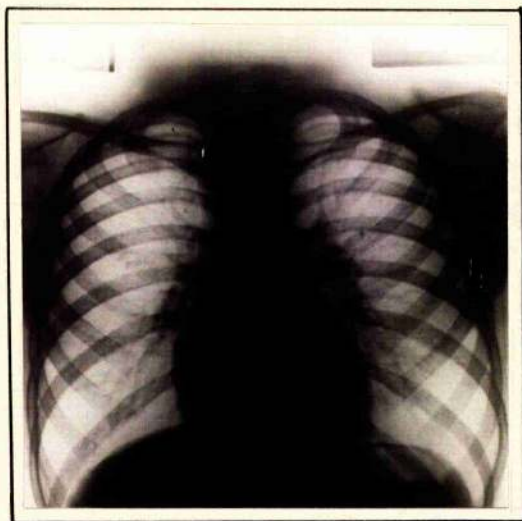


Plate 2. At First Examination.

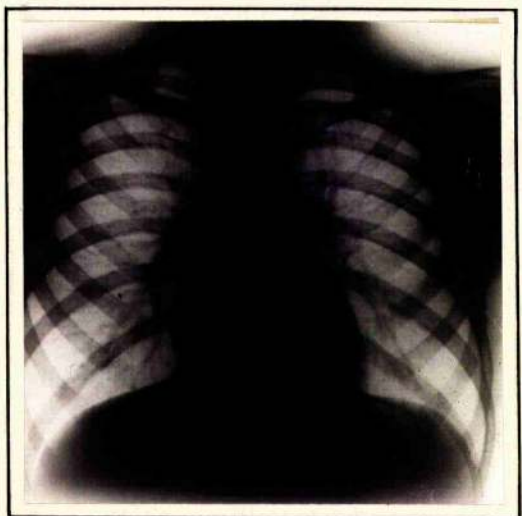


Plate 2 a. At Three Months.

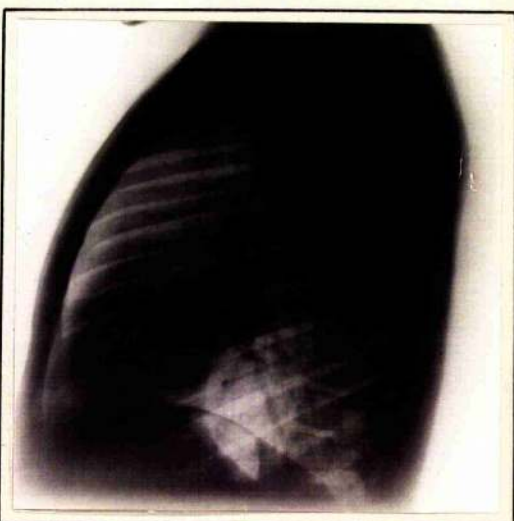
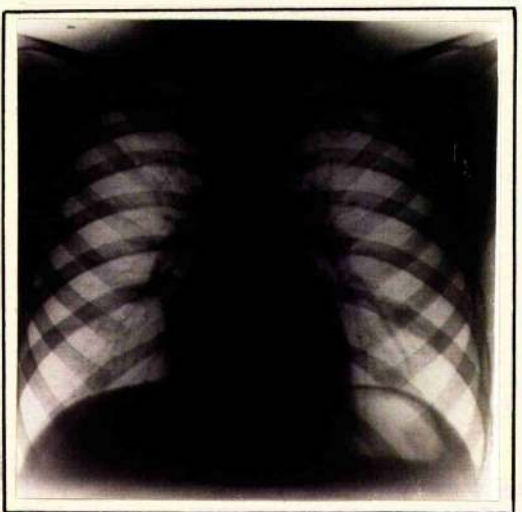


Plate 2 b. At Six Months.

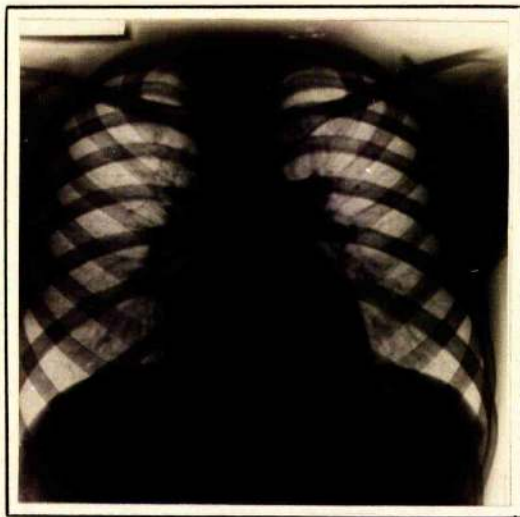


Plate 2 c. At One Year.

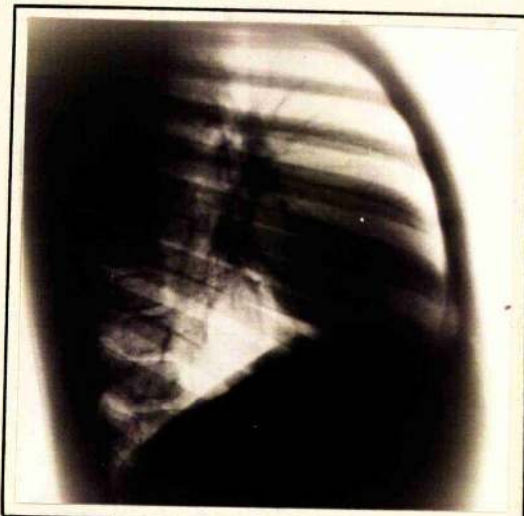
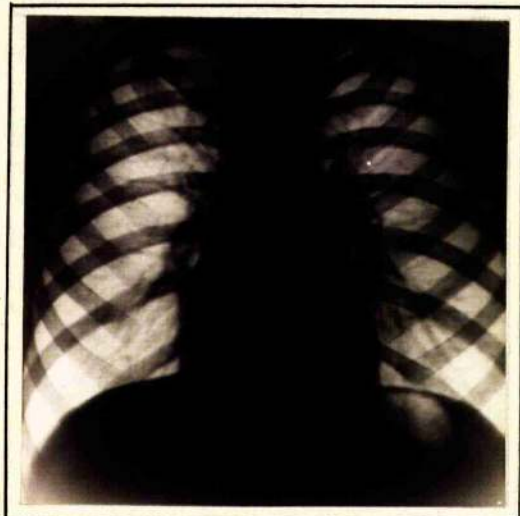


Plate 2 d. At Eighteen Months.

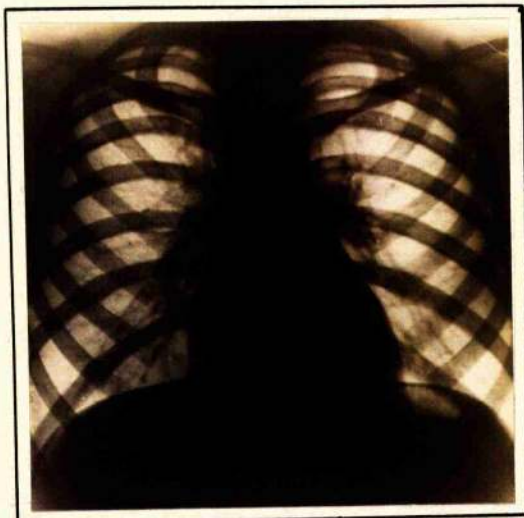


Plate 2 e. At Two Years.

Name. F.S. Sex. Female. Age. 5 years 7 months.

Date of Birth. 19/8/38

Feeding. At breast for three months and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. One brother aged nine months is healthy. The child's father was in a sanatorium for eight months, when he was eleven years of age.

Previous Illnesses

Measles July, 1941.
Whooping cough January, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme in the centre of a town. The bedroom windows are kept closed during the night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(5 years 7 months)

Height and Weight. 40.5 inches. 36 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: -4321 12345
Total number of teeth: 19

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, streptococci, pneumococci and diphtheroid types.

Haematology.

Erythrocytes 4,790,000 per c.mm.
Leucocytes 10,949 per c.mm.
Haemoglobin 87 per cent. Colour Index 0.92

Differential Leucocyte Count:-

Neutrophils 52.00 per cent. (5,693 per c.mm.)
Eosinophils 1.00 per cent. (109 per c.mm.)
Basophils 0.50 per cent. (54 per c.mm.)
Lymphocytes 43.00 per cent. (4,708 per c.mm.)
Monocytes 3.50 per cent. (383 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	14	39	38	8	1

Physical Examination of Chest. Muscular development fair. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Marked enlargement of the anterior superficial veins over upper right half of chest and shoulder. No enlarged glands. Percussion note clear. Breath sounds vesicular. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second

dorsal spine. Eustace Smith's sign was absent. An occasional cough.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer (human and bovine) patch test was negative.

Heart. No enlargement. A soft systolic murmur at apex, not conducted into axilla.

Radiographic Findings

Plate 3. 'Chest of good shape and symmetrical. Heart shadow normal.'

Right lung: Root shadow very diffuse with many small calcified glands showing. There is extension of normal striation outwards with a small calcifying patch in middle of right lower lobe.

Left lung: Diffuse root shadow with calcifying tracheo-bronchial glands.

Lateral view shows all the glands in the right hilar region to be calcifying, from tracheal to lower bronchial. ? Primary tubercular complex - initial focus right lower lobe with calcification of all glands on right side.'

SUBSEQUENT EXAMINATIONS

At Three Months (June, 1944)

(5 years 10 months)

Height and Weight. 41 inches (increase of 0.6 inch).
35 pounds (loss of 1 pound).

Physical Examination of Chest. The anterior superficial veins over right half of chest and shoulder are less prominent. Slight impairment of percussion note over upper part of sternum. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 3 a. 'There is a slight but definite improvement in the radiological appearance. The right root shadow is less in extent and the lung striation is reduced to normal proportions generally, though it still persists into anterior and posterior basal zones. The lower bronchial glands are firming and the patch in the lung tissue is rather smaller and still apparently calcifying.'

At Six Months (September, 1944)

(6 years 1 month)

Height and Weight. 41.75 inches (increase of 0.75 inch).
38 pounds (gain of 3 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest and shoulder still prominent. Slight impairment of percussion note over upper part of sternum. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 3 b. 'Marked increase in size of chest. Continued improvement in appearance with reduction in lung striation. Tuberculous focus in right lung is smaller and denser.

Lateral view shows increasing calcification of glands.'

At One Year (March, 1945)

(6 years 7 months)

Height and Weight. 43 inches (increase of 1.25 inches).
39 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest still prominent. Slight impairment of percussion note over upper part of right side of chest anteriorly. Slight interscapular dullness. Breath sounds puerile in character, especially over right side of chest, with scattered rhonchi on deep inspiration. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was present. During the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 3 c. 'Right root shadow less diffuse and containing many well calcified glands in bronchial group and along lower lobe bronchi. A small calcified spot in lung tissue at the level of the seventh interspace posteriorly suggests a healed primary focus of tuberculosis.

The left root is still extending upwards but is not so markedly congested.

Lateral view shows numerous calcified glands.'

At Eighteen Months (September, 1945)

(7 years 1 month)

Height and Weight. 44.25 inches (increase of 1.25 inches).
42 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins extending from right shoulder to middle of clavicle. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 3 d. 'The right lower bronchial glands remain small and firm. There is a marked improvement in the congestion around the right basal bronchi. The upper right lung field and the left lung remain unchanged.

Lateral view confirms less congestion into right base.'

At Two Years (March, 1946)

(7 years 7 months)

Height and Weight. 45.25 inches (increase of 1 inch)
44 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest still prominent. On percussion no abnormality was detected. A few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was present. For the past few days the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

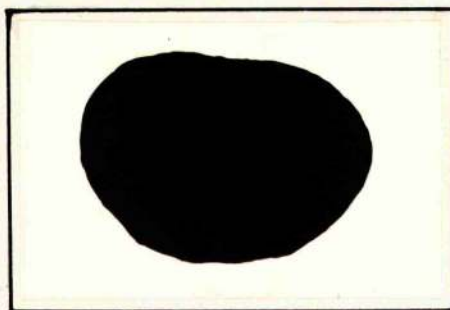
Plate 3 e. 'As compared with six months ago there is little change to be noted.

As compared with two years ago the root shadows remain as extensive and as soft as before. The lung fields show the same amount of peribronchial congestion. There is no change in the character or size of the gland masses.

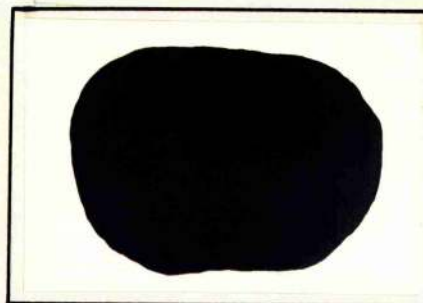
Lateral view: The root shadows remain unchanged, though upper lung fields appear clearer.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 3.At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Fig. 3 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

20 inches.

22 inches.

(Female. 5 years 7 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Knickers	Silk
Knickers	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Frock	Cotton
Skirt	Wool		
Coat	Nap		
Scarf	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

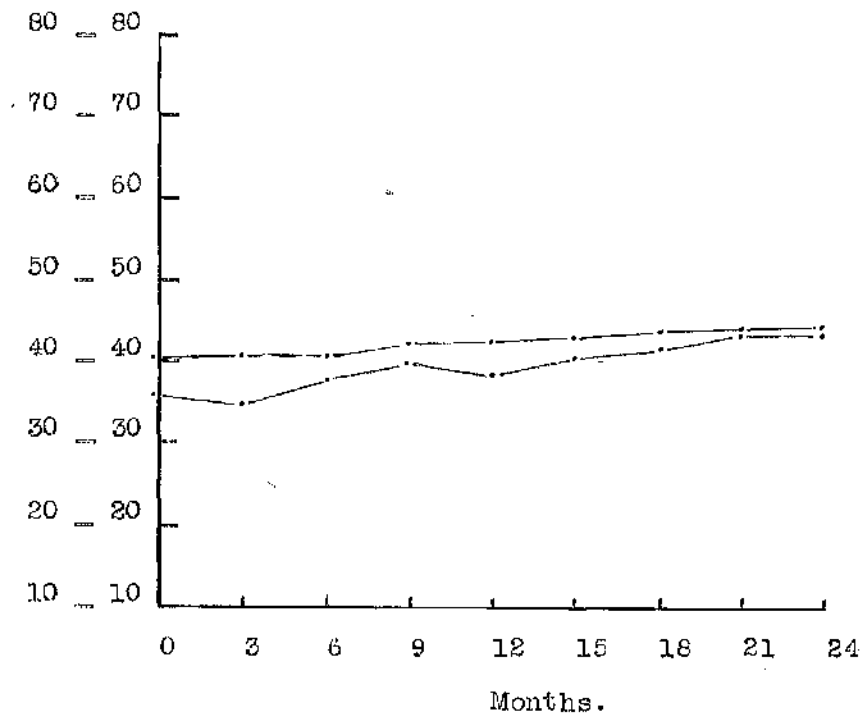
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



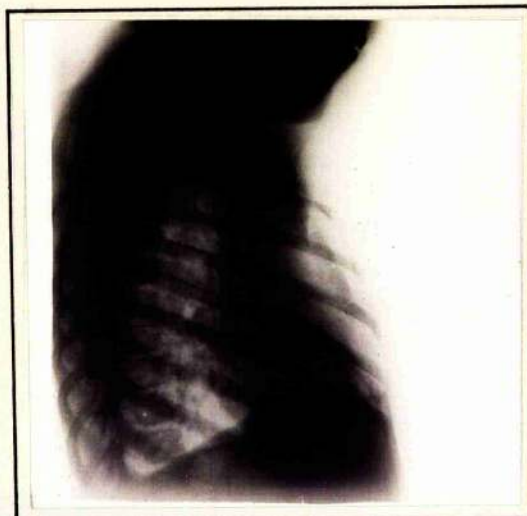
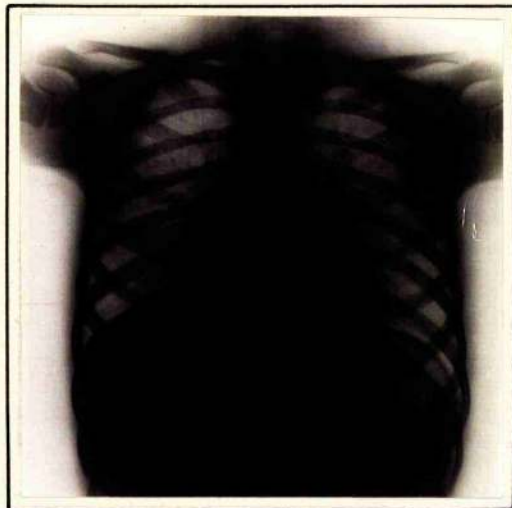


Plate 3. At First Examination.

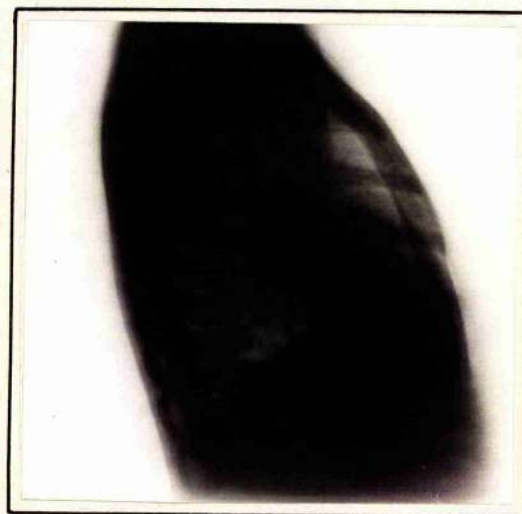
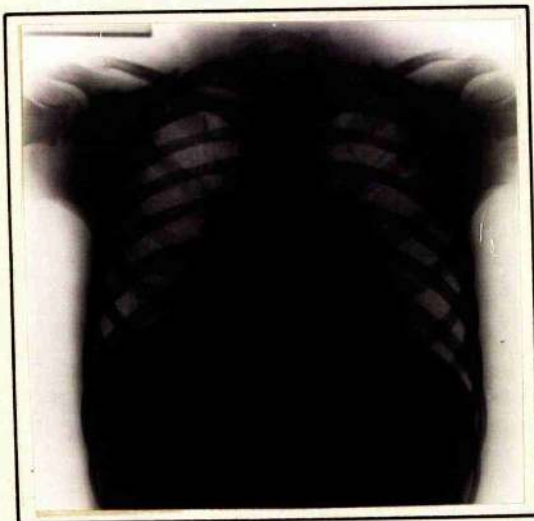


Plate 3 a. At Three Months.

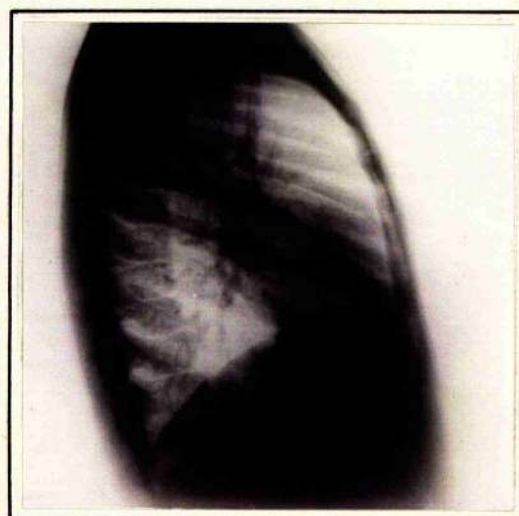
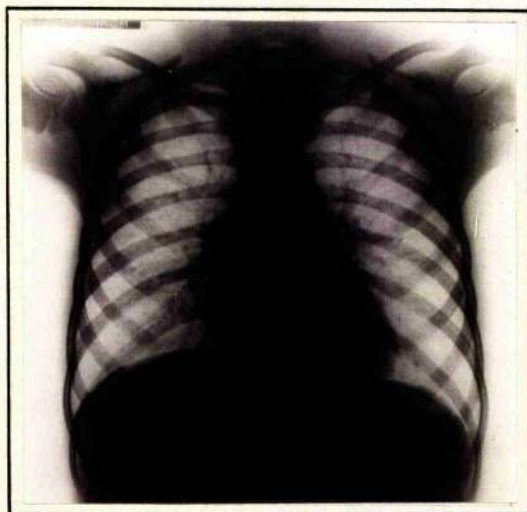


Plate 3 b. At Six Months.



Plate 3 c. At One Year.

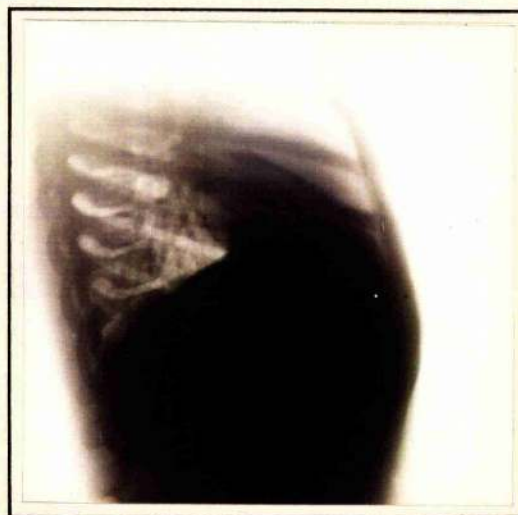
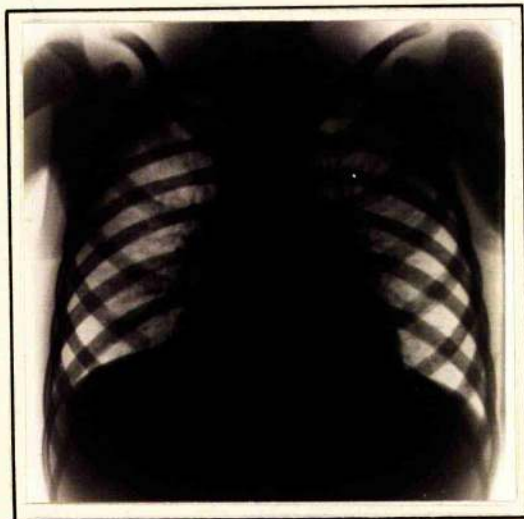


Plate 3 d. At Eighteen Months.

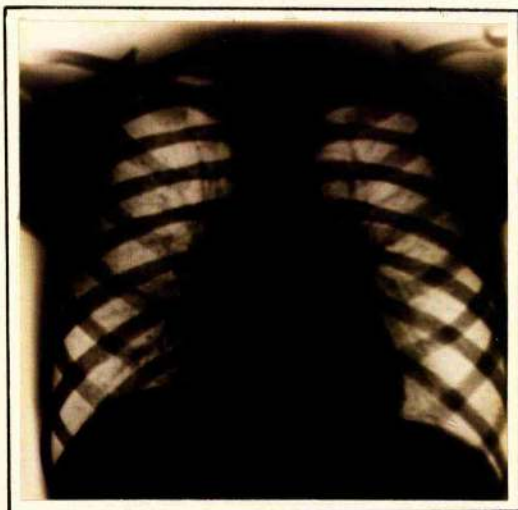


Plate 3 e. At Two Years.

Name. M. McK. Sex. Male. Age. 6 years 4 months.

Date of Birth. 1/11/37.

Feeding. At breast for eight months.

Family History. Parents are alive and well. One brother aged two years has whooping cough, (case 8). No family history of tuberculosis.

Previous Illnesses

Was subject to frequent attacks of bronchial catarrh from two to five years of age.

Whooping cough January, 1944.

Environment and Parental Care. The family resides in a semi-detached house on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(6 years 4 months)

Height and Weight. 48.75 inches. 51 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 654321 123456
Teeth in lower jaw: 654321 123456
Total number of teeth: 24

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, pneumococci, diphtheroids and streptococci including haemolytic strains.

Haematology.

Erythrocytes 4,660,000 per c.mm.
Leucocytes 13,000 per c.mm.
Haemoglobin 90 per cent. Colour Index 0.97

Differential Leucocyte Count:-

Neutrophils 52.75 per cent. (7,068 per c.mm.)
Eosinophils 0.25 per cent. (33 per c.mm.)
Basophils 0.50 per cent. (67 per c.mm.)
Lymphocytes 39.00 per cent. (5,226 per c.mm.)
Monocytes 7.50 per cent. (1,005 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	14	44	39	3	0

Physical Examination of Chest. Muscular development moderate. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 23 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 7.5 inches. Skin texture coarse. Enlargement of superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The

tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. Cough and an occasional whoop present.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 4. 'Chest well formed and symmetrical. Heart normal in size.

Right lung: Very diffuse root shadow with thickening of bronchial tree and all glands, upper bronchial, tracheo-bronchial, hilar and lower bronchial, showing as well defined shadows. The right cardio-phrenic angle is obliterated by thickening of lower bronchial tree.

Left lung: The root shadows are similarly enlarged, but to a lesser extent. Lung striation is slightly exaggerated. Upper bronchial glands are enlarged.

Lateral view shows general increase in bronchial tree, most marked into posterior part of lower lobe. General enlargement of all glands.'

SUBSEQUENT EXAMINATIONS

At Three Months (June, 1944)

(6 years 7 months)

Height and Weight. 49.5 inches (increase of 0.75 inch). 56 pounds (gain of 5 pounds).

Physical Examination of Chest. The anterior superficial veins over upper part of chest, extending towards both shoulders, are prominent. Slight dullness over upper part of sternum. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 4 a. 'Right lung: The root shadows remain diffuse. The glands show a little more firming. The increase in bronchial tree remains.

Left lung: No change noted.

Lateral view shows no noticeable change.'

At Six Months (September, 1944)

(6 years 10 months)

Height and Weight. 51 inches (increase of 1.5 inches). 56 pounds (no gain).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second

dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. The tuberculin jelly patch test was positive.

Radiographic Findings

Plate 4 b. 'Improvement continues markedly. Lateral view shows root much clearer and basal striation is much less.'

In February, the child had three slight bronchial colds with elevation of temperature, lasting on each occasion for three days.

At One Year (March, 1945)

(7 years 4 months)

Height and Weight. 51.5 inches (increase of 0.5 inch). 56 pounds (no gain).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are still prominent. Slight dullness over upper part of sternum. Breath sounds harsh, especially over right half of chest. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was present.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 4 c. 'Much periglandular and peribronchial congestion remains, and there is no real improvement noted in the film as compared with March, 1944. If anything, right basal striation is still more pronounced, as is also right upper and left upper striation.

Lateral view does show an improvement in the definition of glands along right basal bronchi.'

At Eighteen Months (September, 1945)

(7 years 10 months)

Height and Weight. 53 inches (increase of 1.5 inches). 61 pounds (gain of 5 pounds).

Physical Examination of Chest. Little change in the prominence of the anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 4 d. 'There is a slight reduction in the extent of the root shadows as compared with the appearance noted in March, 1945, but the degree of softness shows little change.

Lateral view shows no change.'

In October, the child had a cough for two weeks, especially after lying down in bed at night.

At Two Years (March, 1946)

(8 years 4 months)

Height and Weight. 53.25 inches (increase of 0.25 inch). 65 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and the tuberculin jelly patch tests were positive.

Radiographic Findings

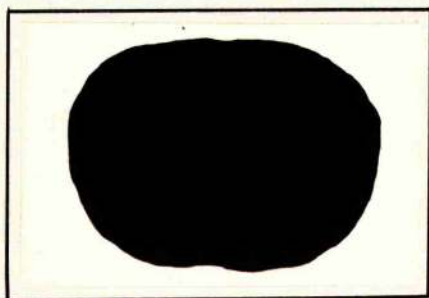
Plate 4 e. 'Compared with six months ago there is no change to be noted.'

Compared with two years ago there is very slight improvement only, and that is most marked by diminution in peribronchial congestion in right cardio-phrenic angle. Otherwise root shadows show little change.

Lateral view shows amount and quality of root shadow remains unchanged.'

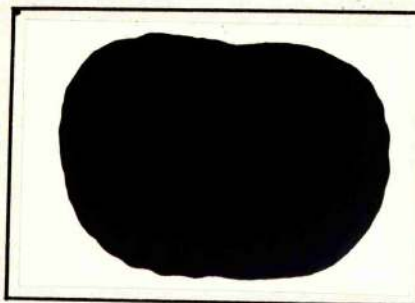
CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 4.At First Examination

A-P. diameter 5.50 inches.

L. diameter 7.50 inches.

Fig. 4 a.At Two Years

A-P. diameter 5.75 inches.

L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

23 inches.

24 inches.

(Male. 6 years 4 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Shirt	Cotton
Trousers	Corduroy	Trousers	Flannel
Coat	Tweed		
Scarf	Wool		

No cap.

No cap.

Overclothed:

Constriction of chest due to clothing:

Interference with circulation due to clothing:

No.

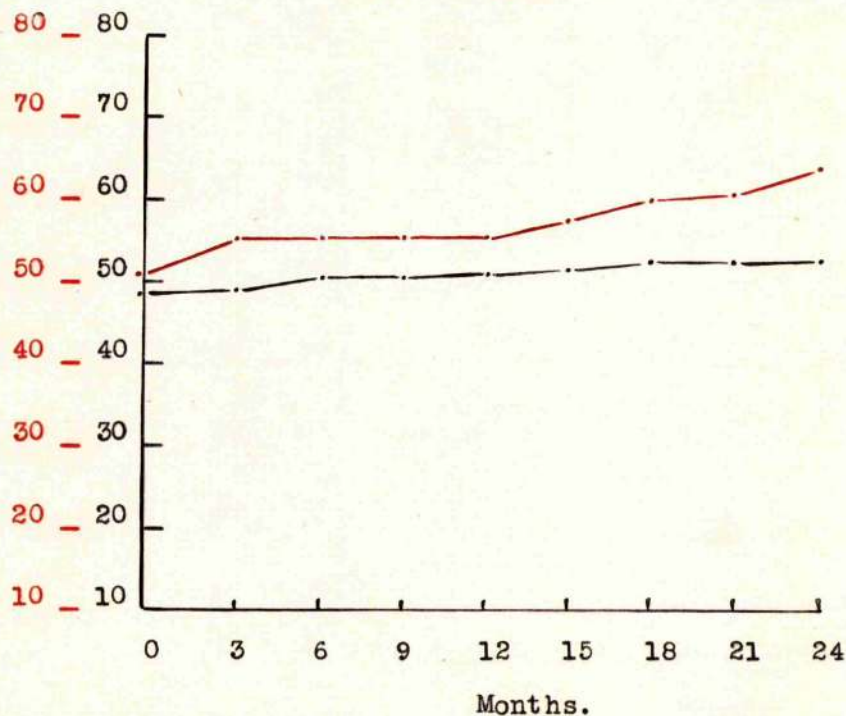
None.

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



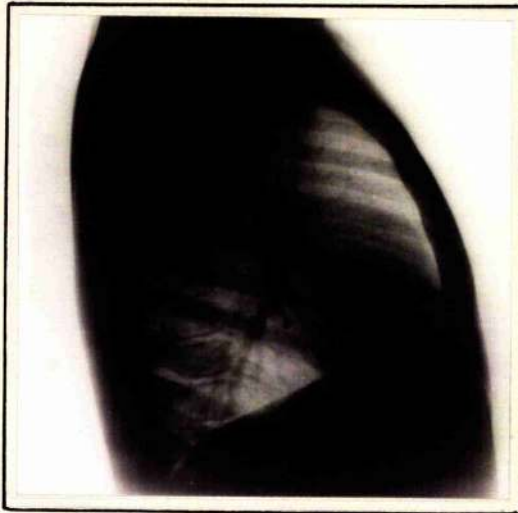
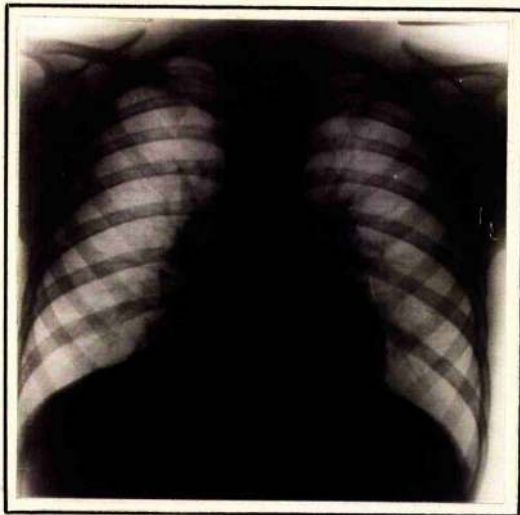


Plate 4. At First Examination.

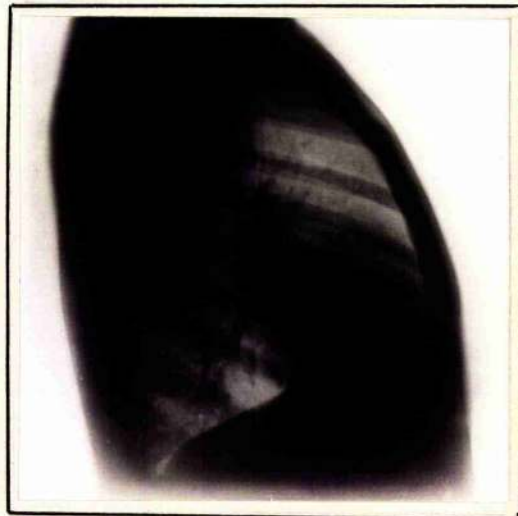
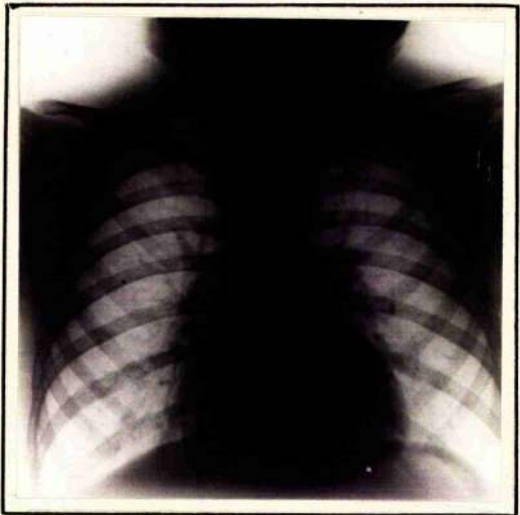


Plate 4 a. At Three Months.

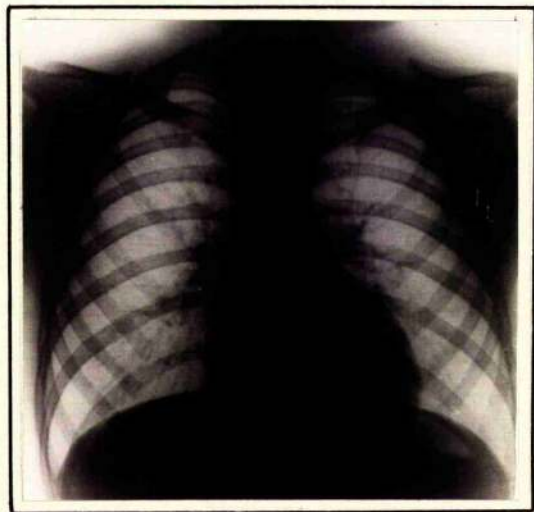


Plate 4 b. At Six Months.

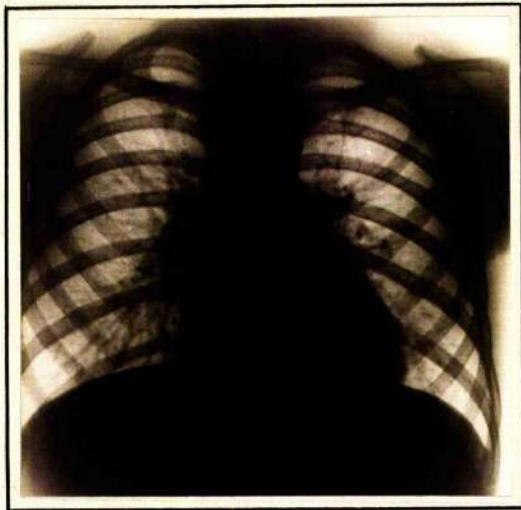


Plate 4 c. At One Year.

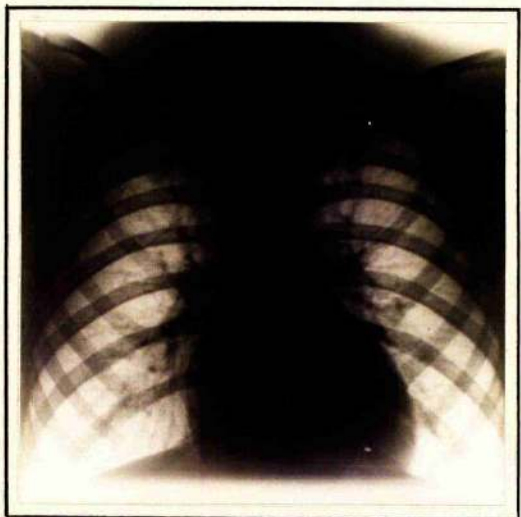


Plate 4 d. At Eighteen Months.

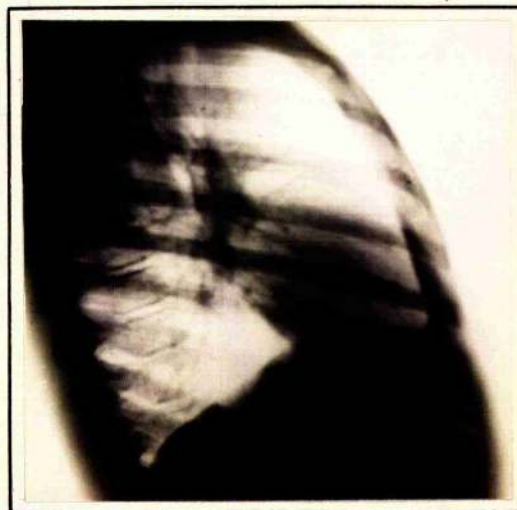
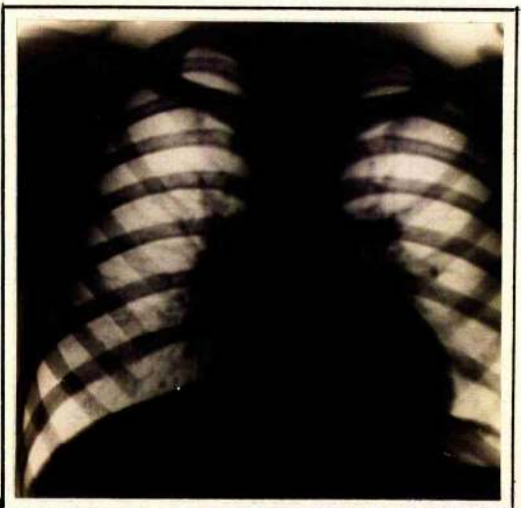


Plate 4 e. At Two Years.

Name. M.D. Sex. Male. Age. 6 years 3 months.

Date of Birth. 6/12/37.

Feeding. Cow's milk (not boiled) as mother did not wish to breast feed.

Family History. Parents are alive and well. Only child. Father's younger brother has pulmonary tuberculosis.

Previous Illnesses

Bronchitis	February, 1938.
Measles	September, 1939.
Whooping cough	January, 1944.

Environment and Parental Care. The family resides in a self-contained house on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944

(6 years 3 months)

Height and Weight. 44 inches, 42 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	654321	123456
Teeth in lower jaw:	654321	12345-
Total number of teeth:	23	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly M. catarrhalis and streptococci.

Haematology.

Erythrocytes	5,033,000 per c.mm.
Leucocytes	9,066 per c.mm.
Haemoglobin 85 per cent.	Colour Index 0.85

Differential Leucocyte Count:-

Neutrophils	37.00 per cent.	(3,254 per c.mm.)
Eosinophils	3.50 per cent.	(317 per c.mm.)
Basophils	0.50 per cent.	(45 per c.mm.)
Lymphocytes	53.50 per cent.	(4,850 per c.mm.)
Monocytes	5.50 per cent.	(498 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	41	44	15	0	0

Physical Examination of Chest. Muscular development moderate. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 7.25 inches. Skin texture fine. Slight enlargement of the anterior superficial veins over upper part of chest. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. A

very occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 5. 'Chest of good shape and symmetrical. Heart normal in size.

Right lung: No definite increase in root shadow. Lung tissue is clear from apex to base.

Left lung: The root shadow is diffusely enlarged. The upper tracheo-bronchial gland is enlarged and the hilar glands are visible. There is a slight thickening of the bronchial tree generally, but particularly into the sub-apical zone and into the basal zone.

Lateral view shows increase in bronchial tree, particularly left lower and posterior bronchial branches. Glands are visible at the branching of the bronchi.'

SUBSEQUENT EXAMINATIONS

In May the child had his tonsils and adenoids removed.

At Three Months (June, 1944)

(6 years 6 months).

Height and Weight. 45.75 inches (increase of 1.75 inches) 45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest less marked. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 5 a. 'Right lung: Unchanged.

Left lung: The root shadow has diminished in size. The glands are still visible but there is no surrounding congestion. The bronchial tree is also less prominent.

Lateral view shows little change.'

In August the child had a cough for two weeks, especially after lying down in bed at night.

At Six Months (September, 1944)

(6 years 9 months)

Height and Weight. 45.75 inches (no increase). 45.5 pounds (gain of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins of chest not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second

dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 5 b. 'Improvement in root shadow continues generally though there is some enlargement remaining at the upper pole of left root. The glands are small and hard. There is very little increase in lung striation.

Lateral view shows improvement in root shadow. Small firm glands visible in all areas.'

In November and also in December the child had a bronchial cold which lasted, on each occasion, for ten days.

At One Year (March, 1945)

(7 years 3 months)

Height and Weight. 47.25 inches (increase of 1.5 inches)
49 pounds (gain of 3.5 pounds).

Physical Examination of Chest. Slight enlargement of the anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 5 c. 'Right lung: The root shadow remains slightly diffuse but the glands are small and firm in central bronchial group and along right upper and lower lobe bronchi, into which lobes the lung markings remain slightly increased.

Left lung: The root shadow is less pronounced at upper pole and lung striation is back to within normal limits.

Lateral view shows diminution in amount of root shadow and increasing definition of detail.'

At Eighteen Months (September, 1945)

(7 years 9 months)

Height and Weight. 48.5 inches (increase of 1.25 inches)
50 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins on right side of chest less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 5 d. 'There is no change noted from March, 1945.'

In January the child had a bronchial cold for two weeks.

At Two Years (March, 1946)

(8 years 3 months)

Height and Weight. 49.75 inches (increase of 1.25 inches)
54 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

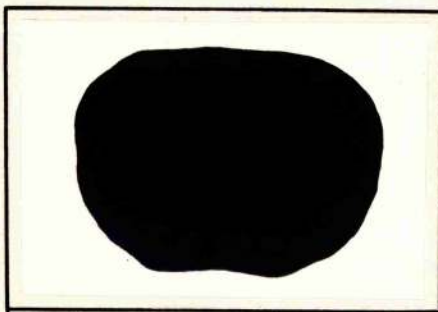
Plate 5 e. 'Compared with six months ago there is an improvement noted generally in the root shadows and glandular masses.

Lateral view shows apparently no change.

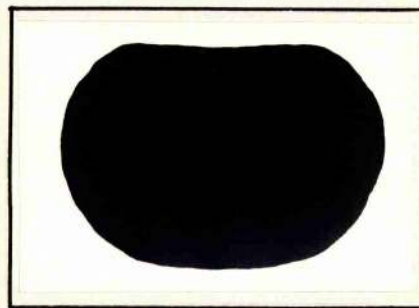
Compared with two years ago the root shadows are less diffuse and also less congested. In particular all gland shadows are now small and firm and show no fluffiness of periadenitis. The lung fields are much clearer, though lung striation remains slightly increased.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 5.At First Examination

A-P. diameter 5.50 inches.
L. diameter 7.25 inches.

Fig 5 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.75 inches.

Circumference of Chest During Quiet Respiration

21.50 inches.

23.00 inches.

(Male. 6 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Wool	Shirt	Cotton
Pullover	Wool	Trousers	Flannel
Trousers	Flannel		
Coat	Tweed		
Scarf	Wool		

Knitted hood.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

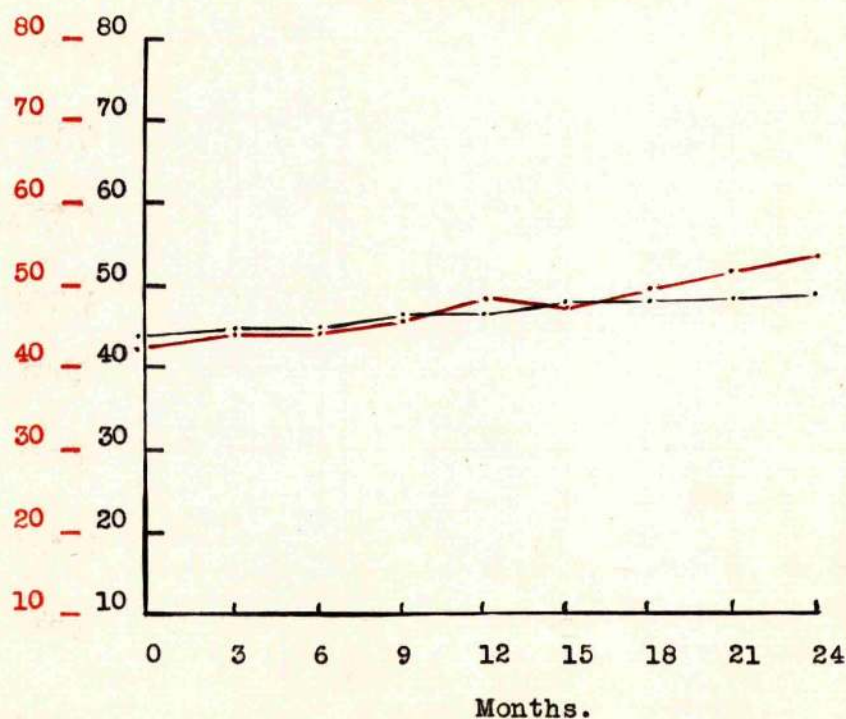
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



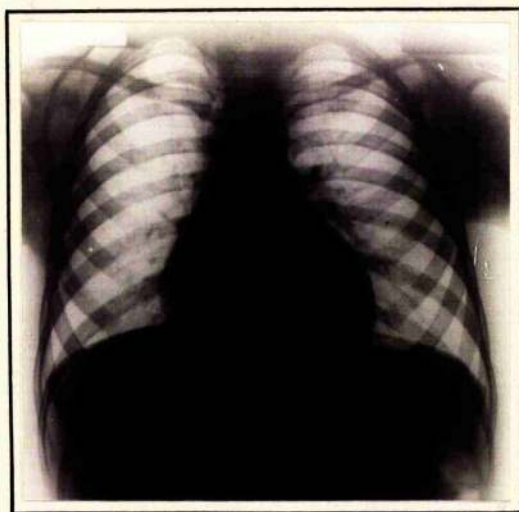


Plate 5. At First Examination.

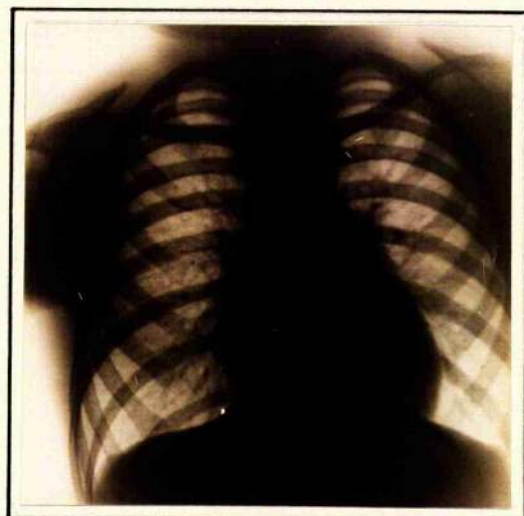


Plate 5 a. At Three Months.

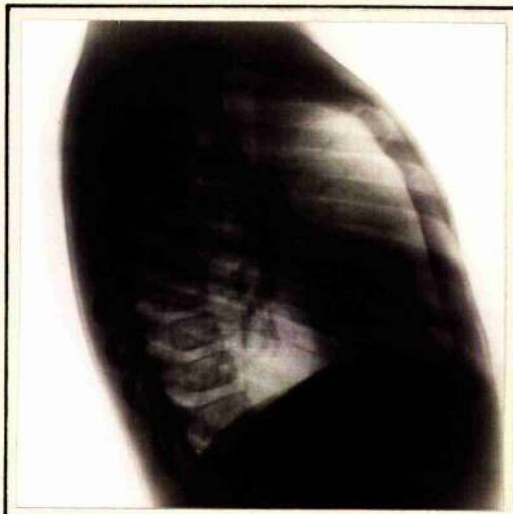
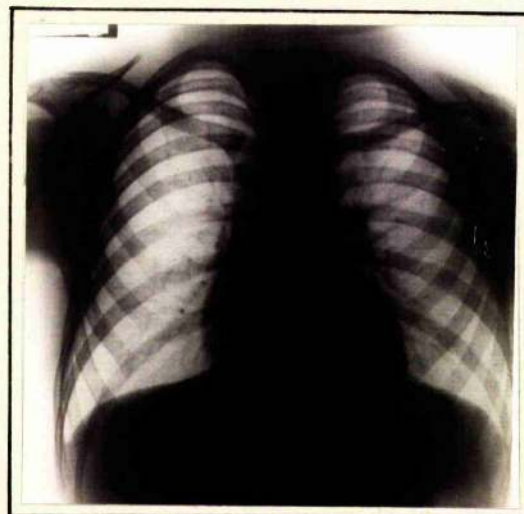


Plate 5 b. At Six Months.

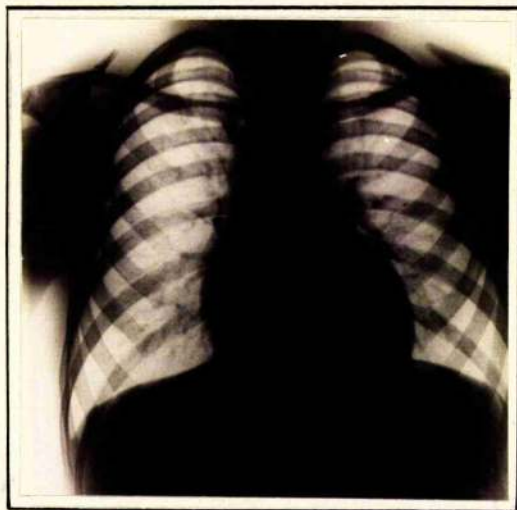


Plate 5 c. At One Year.

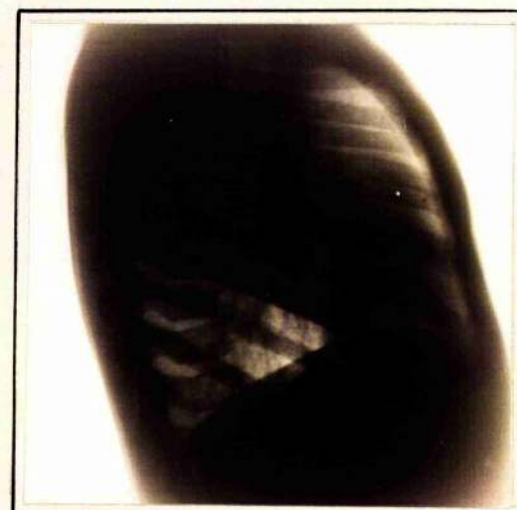
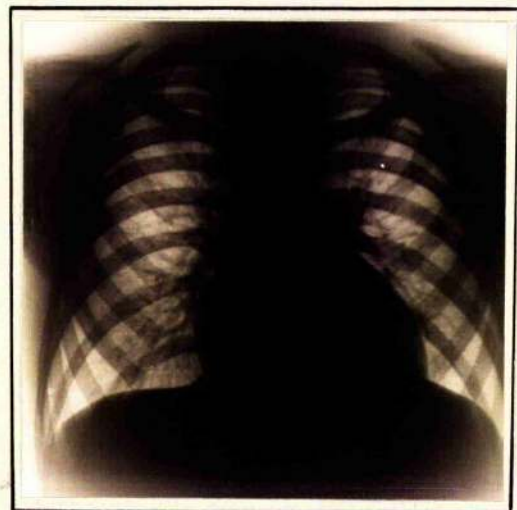


Plate 5 d. At Eighteen Months.

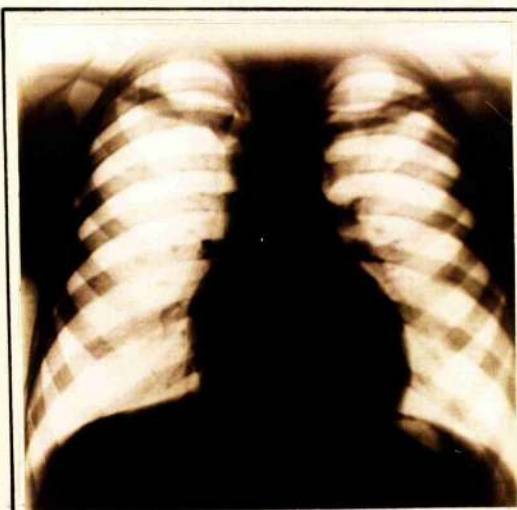


Plate 5 e. At Two Years.

Name. P.McM. Sex. Male. Age. 5 years 10 months.

Date of Birth. 15/5/38.

Feeding. At breast for nine months.

Family History. Parents are alive and well. Two sisters aged thirteen and a half and eleven and a half years are healthy. Two brothers, one aged three years nine months has whooping cough, (case 7) and the other aged three months is healthy. No family history of tuberculosis.

Previous Illnesses

Acute Nephritis	August, 1942.
Pneumonia	January, 1943.
Scarlet Fever	October, 1943.
Whooping cough,	February, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(5 years 10 months)

Height and Weight. 43 inches. 40 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth all decayed except (1 and 4).

Teeth in upper jaw:	543-- --345
Teeth in lower jaw:	54321 -23-5
Total number of teeth:	14

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, pneumococci and streptococci including haemolytic strains.

Haematology.

Erythrocytes	5,640,000 per c.mm.
Leucocytes	12,288 per c.mm.
Haemoglobin 85 per cent.	Colour Index 0.76

Differential Leucocyte Count:-

Neutrophils	61.25 per cent.	(7,526 per c.mm.)
Eosinophils	3.25 per cent.	(399 per c.mm.)
Basophils	0.75 per cent.	(92 per c.mm.)
Lymphocytes	26.75 per cent.	(3,287 per c.mm.)
Monocytes	8.00 per cent.	(983 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	15	54	27	4	0

Physical Examination of Chest. Muscular development poor. Scapulae winged. No spinal deformity. Circumference of chest during quiet respiration 22 inches. Antero-posterior diameter 4.5 inches. Lateral diameter 8 inches. Skin texture fine. The anterior superficial veins over upper part of chest are prominent. No enlarged glands. Percussion note clear. Breath

sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 6. 'Chest squat, short and broad, but symmetrical.

Right lung: Diffuse root shadow with numerous small calcified glands. Striation of lung fields slightly increased.

Left lung: Enlargement of root shadow at its upper pole, with enlarged upper bronchial glands. Slight increase of lung striation.'

SUBSEQUENT EXAMINATIONS

In May the child had eleven teeth extracted.

At Three Months (June, 1944)

(6 years 1 month)

Height and Weight. 44.5 inches (increase of 1.5 inches). 42 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest are less prominent. On percussion no abnormality was detected. Breath sounds vesicular and harsh with a few scattered rhonchi, especially over anterior part of left side of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 6 a. 'Increase in size of chest. Little change in lung striation. Root shadow shows a slight improvement in definition.

Lateral view shows glands present throughout root.'

At Six Months (September, 1944)

(6 years 4 months)

Height and Weight. 45.25 inches (increase of 0.75 inch). 43 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 6 b. 'Slight but definite reduction in density of root.

shadow and similarly of lung striation.'

In November the child had mumps. In December he had a cough for two weeks and in February for a similar period, especially after lying down in bed at night.

At One Year (March, 1945)

(6 years 10 months)

Height and Weight. 46.5 inches (increase of 1.25 inches). 44 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest not noted. On percussion no abnormality was detected. A few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 6 c. 'Improvement in the right root shadow, which is now less diffuse. Glands only visible now along upper lobe bronchi. Right basal striation now more pronounced than in March, 1944.

Left root shadow shows slight improvement in definition of glands of upper lobe bronchi.'

At Eighteen Months (September, 1945)

(7 years 4 months)

Height and Weight. 47.25 inches (increase of 0.75 inch). 46 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight dullness over first and second dorsal vertebrae. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 6 d. 'Difference in exposure makes real comparison difficult. There would appear, however, to be a slight diminution in the root shadow, particularly affecting the glands and bronchi into right base and left upper lobes.'

In January the child had scarlet fever.

At Two Years (March, 1946)

(8 years 10 months)

Height and Weight. 48.5 inches (increase of 1.25 inches). 48 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight dullness over first and second dorsal vertebrae. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough for past week, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 6 e. 'Compared with six months ago there is little change to be noted.

Compared with two years ago there is no great reduction in extent of the root shadow generally, but a great improvement in its quality. The congestion is much less, and the glands along the right lower lobe bronchi and the left upper lobe bronchi are smaller and firmer. The lung fields show much less evidence of peribronchial congestion, though the left lung is not yet quite clear.'

CYRTOMETER TRACINGS

(one quarter natural size)

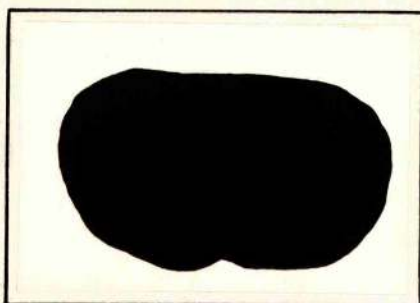


Fig. 6.

At First Examination

A-P. diameter 4.50 inches.
L. diameter 8.00 inches.

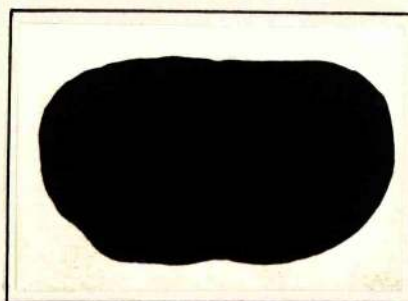


Fig. 6 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

22.00 inches.

23.50 inches.

(Male. 5 years 10 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Binder	Wool	Binder	Wool
Vest	Wool	Vest	Cotton
Combinations	Cotton		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Wool	Shirt	Cotton
Pullover	Wool	Pullover	Wool
Trousers	Flannel	Trousers	Flannel
Coat	Tweed		
Scarf	Wool		

Cap.

No cap.

Overclothed:

Yes.

Constriction of chest due to clothing:

None.

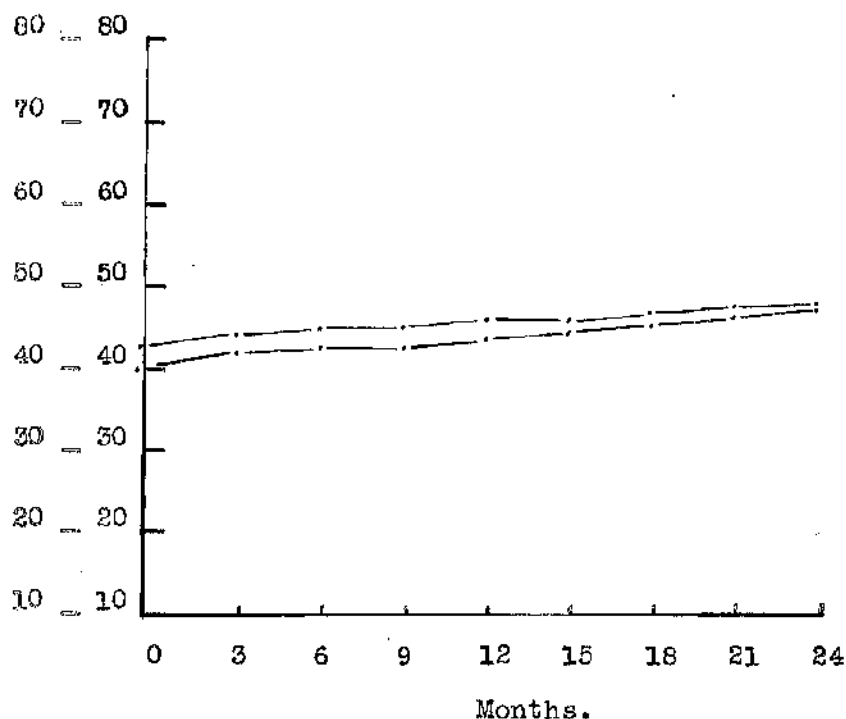
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



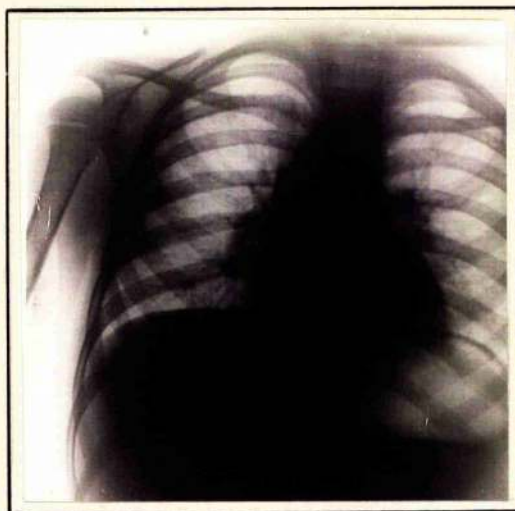


Plate 6. At First Examination.

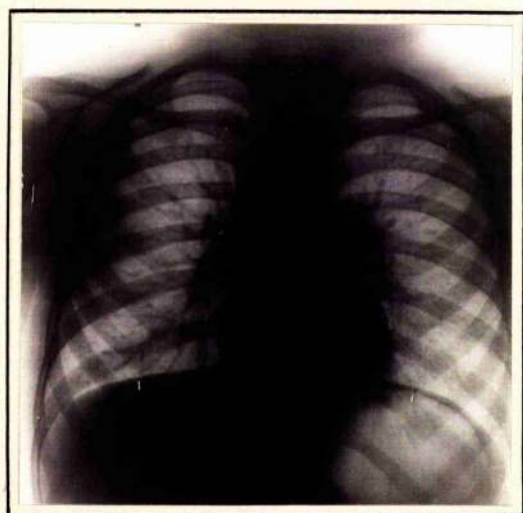


Plate 6 a. At Three Months.

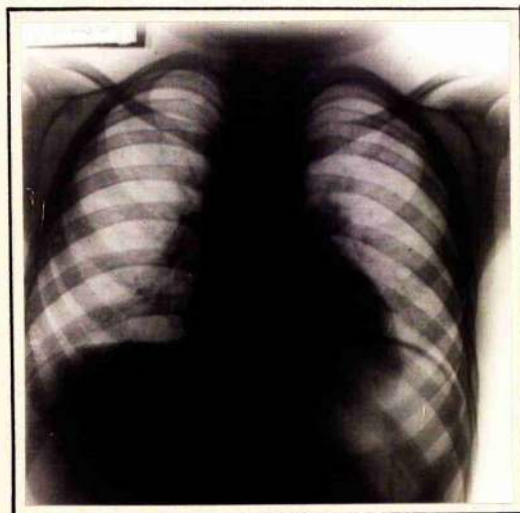


Plate 6 b. At Six Months.

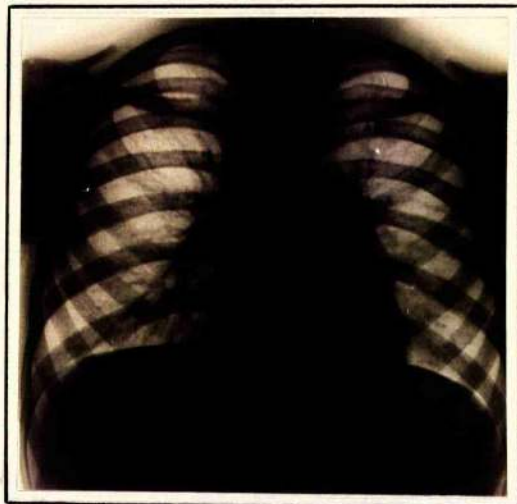


Plate 6 c. At One Year.

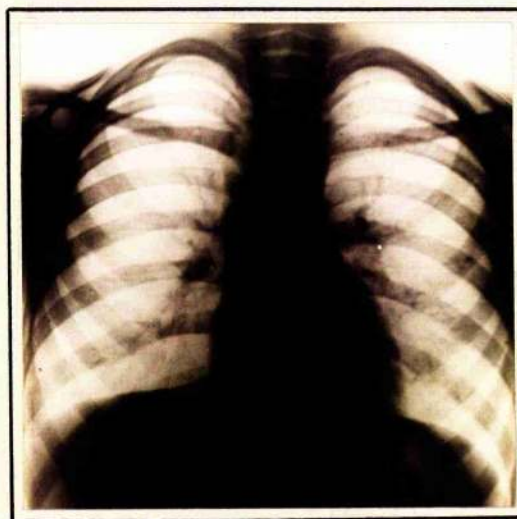


Plate 6 d. At Eighteen Months.

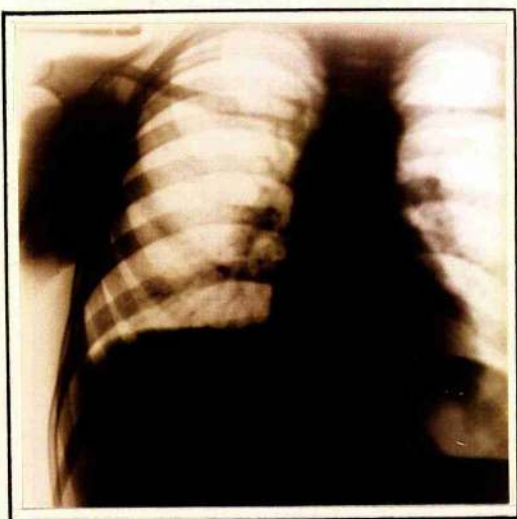


Plate 6 e. At Two Years.

Name. L.McM. Sex. Male. Age. 3 years 9 months.

Date of Birth. 11/6/40.

Feeding. At breast for eleven months.

Family History. Parents are alive and well. Two sisters aged thirteen and a half and eleven and a half years are healthy. Two brothers, one aged six years has whooping cough (case 6), and the other aged three months, is healthy. No family history of tuberculosis.

Previous Illnesses

Congenital clubbed feet.
Whooping cough February, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(3 years 9 months)

Height and Weight. 35 inches. 26 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition, except (5 and 4) in lower jaw, which are decayed.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears are healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, pneumococci, diphtheroids and streptococci including haemolytic strains.

Haematology.

Erythrocytes	4,450,000 per c.mm.
Leucocytes	6,622 per c.mm.
Haemoglobin 85 per cent.	Colour Index 0.94

Differential Leucocyte Count:-

Neutrophils	41.25 per cent.	(2,731 per c.mm.)
Eosinophils	3.25 per cent.	(215 per c.mm.)
Basophils	1.00 per cent.	(66 per c.mm.)
Lymphocytes	46.25 per cent.	(3,062 per c.mm.)
Monocytes	8.25 per cent.	(546 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	16	44	36	4	0

Physical Examination of Chest. Muscular development fair. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 19 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds

vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 7. 'Not very definite; general enlargement of root shadows.'

SUBSEQUENT EXAMINATIONS

At Three Months (June, 1944)

(4 years)

Height and Weight. 35.25 inches (increase of 0.25 inch). 28 pounds (gain of 2 pounds).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 7 a. 'Movement of chest during exposure. There is an improvement in the appearance of the left root shadow which is less diffuse and the glandular masses more defined.'

At Six Months (September, 1944)

(4 years 3 months)

Height and Weight. 36 inches (increase of 0.75 inch). 30 pounds (gain of 2 pounds).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent.

During the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 7 b. 'The root shadows, both right and left, remain quantitatively and qualitatively unchanged. Left upper lobe striation is exaggerated and leads to a small point in infra-clavicular area, ? primary focus of tuberculosis.'

In November the child had mumps. In December and in February he had bronchial catarrh which lasted for ten days on each occasion.

At One Year (March, 1945)

(4 years 9 months)

Height and Weight. 37.25 inches (increase of 1.25 inches). 30 pounds (no gain).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 7 c. 'The root shadows remain unchanged. It is still diffusely enlarged, with no appreciable difference in quality or quantity of gland shadow. There is, however, a slight clearing of the peribronchial congestion in the lung fields generally.'

In May the child had a cough for two weeks and in August for a similar period, especially after lying down in bed at night.

At Eighteen Months (September, 1945)

(5 years 3 months)

Height and Weight. 38.5 inches (increase of 1.25 inches). 32 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 7 d. 'General diminution in increase of lung striation previously noted. Glands of right upper bronchial group appear to be firming, as do the glands of left upper bronchial group.

Right lateral view shows firm gland shadows in upper bronchial group and some increase of bronchial markings into right posterior basal zone.'

In February the child had scarlet fever.

At Two Years (March, 1946)

(5 years 9 months)

Height and Weight. 39.5 inches (increase of 1 inch). 36 pounds (gain of 4 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

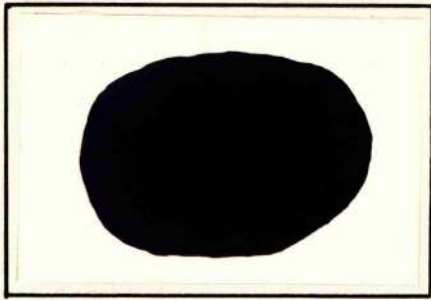
Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

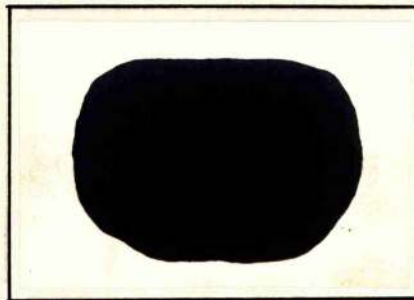
Plate 7 e. 'Compared with six months ago there is little change noted.

Compared with two years ago the root shadows are now much less diffuse and more defined. Glands along bronchi to right upper and lower lobes and left upper lobe are small and firm.'

(one quarter natural size)

Fig. 7.At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Fig. 7 a.At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

19.00 inches.

20.50 inches.

(Male. 3 years 9 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest Combinations	Wool Cotton	Vest Combinations	Cotton Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover Trousers Pantaloon Coat Scarf	Wool Flannel Wool Tweed Wool	Shirt Trousers	Cotton Flannel

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

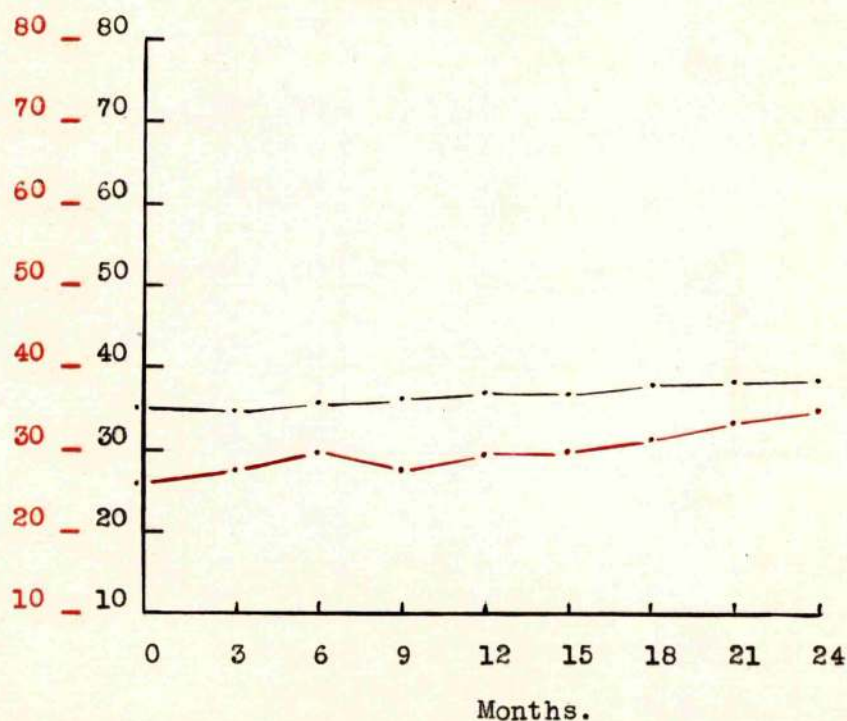
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



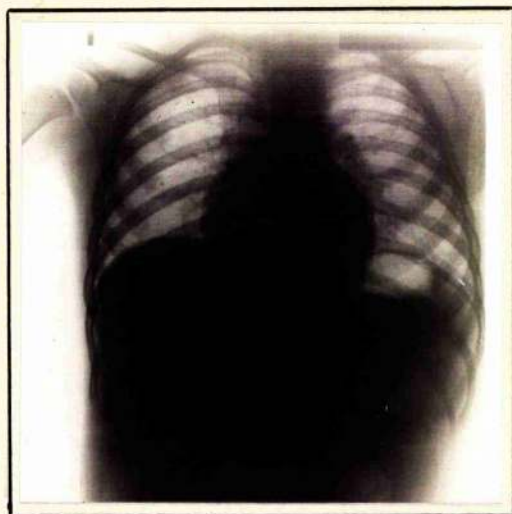


Plate 7. At First Examination.

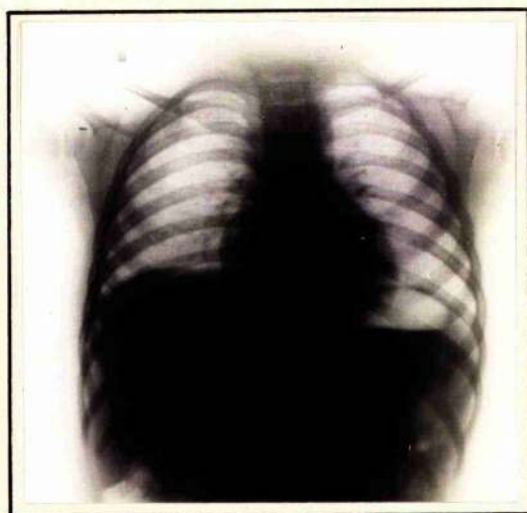


Plate 7 a. At Three Months.

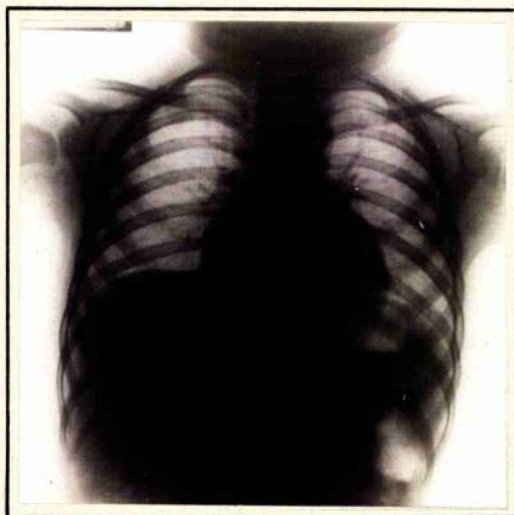


Plate 7 b. At Six Months.

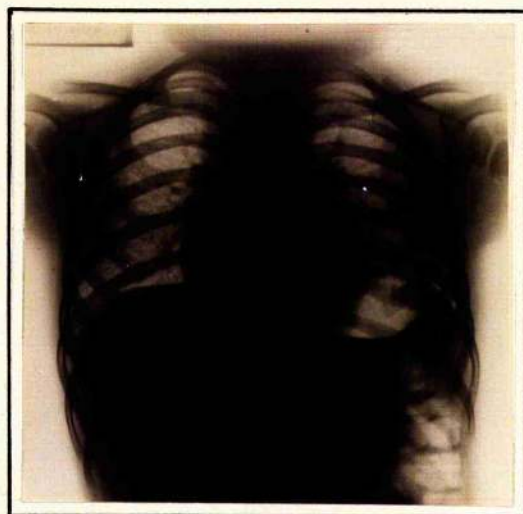


Plate 7 c. At One Year.

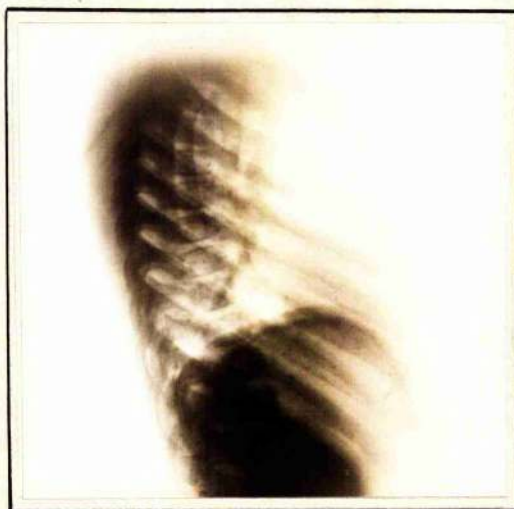
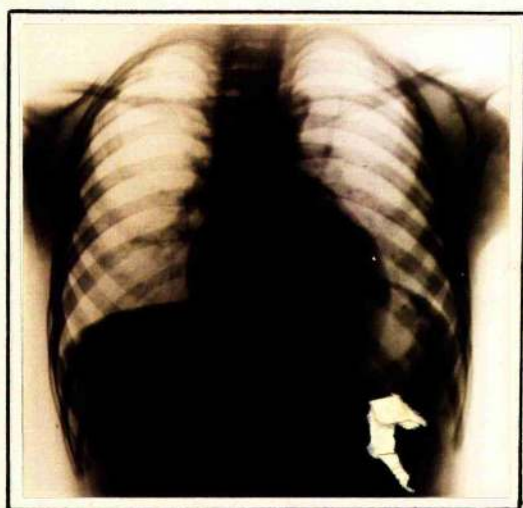


Plate 7 d. At Eighteen Months.



Plate 7 e. At Two Years.

Name. C.McK. Sex. Male. Age. 2 years.

Date of Birth. 14/3/42.

Feeding. At breast for eight months.

Family History. Parents are alive and well. One brother aged six years four months has whooping cough, (case 4). No family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough February, 1944.

Environment and Parental Care. The family resides in a semi-detached house on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

April, 1944.

(2 years)

Height and Weight. 35.5 inches. 31 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	4321	1234
Teeth in lower jaw:	4321	1234
Total number of teeth:	16	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M.catarrhalis*, pneumococci, diphtheroids and streptococci.

Haematology.

Erythrocytes	4,950,000 per c.mm.
Leucocytes	9,377 per c.mm.
Haemoglobin	87 per cent. Colour Index 0.88

Differential Leucocyte Count:-

Neutrophils	48.25 per cent.	(4,524 per c.mm.)
Eosinophils	2.75 per cent.	(257 per c.mm.)
Basophils	0.25 per cent.	(23 per c.mm.)
Lymphocytes	42.25 per cent.	(3,961 per c.mm.)
Monocytes	6.50 per cent.	(609 per c.mm.)

Arneth Count (Cooke):-	Class	1	2	3	4	5
	Per cent.	11	28	54	7	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 4.5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 8. 'Well formed chest, regular and symmetrical. Heart shadow within normal limits.

Right lung: Diffuse increase of the hilar shadows with enlargement of hilar glands.

Left lung: There is a similar enlargement of the root shadow. Some glandular enlargement is also present. A slight increase of lung striation extending out into the lower lung field.'

SUBSEQUENT EXAMINATIONS

At Three Months (July, 1944)

(2 years 3 months)

Height and Weight. 36 inches (increase of 0.5 inch). 33 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 8 a. 'The root shadows remain the same in amount, but the glands are less prominent and reduced in size.'

At Six Months (October, 1944)

(2 years 6 months)

Height and Weight. 36.75 inches (increase of 0.75 inch). 34 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 8 b. 'The root shadow shows no diminution in extent, but a marked improvement in quality. There is much less congestion. The upper lung zones have cleared. Some basal striation remains.

Lateral view shows increased striation into posterior basal zone.'

At One Year (April, 1945)

(3 years)

Height and Weight. 39.5 inches (increase of 2.75 inches). 36 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 8 c. 'Improvement in right root shadow with better definition of mid-bronchial glands and less increase in basal striation.

On the left side a similar improvement is noted, though to a lesser extent in the glands at the root of left upper lobe bronchi.'

At Eighteen Months (October, 1945)

(3 years 6 months)

Height and Weight. 41.75 inches (increase of 2.25 inches). 37.5 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 8 d. 'Little alteration qualitatively or quantitatively in hilar markings. Lung striation shows a slight increase. Lateral view shows no apparent change.'

At Two Years (April, 1946)

(4 years)

Height and Weight. 42.75 inches (increase of 1 inch). 40 pounds (gain of 2.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

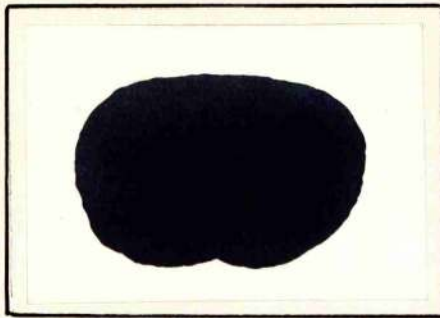
Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

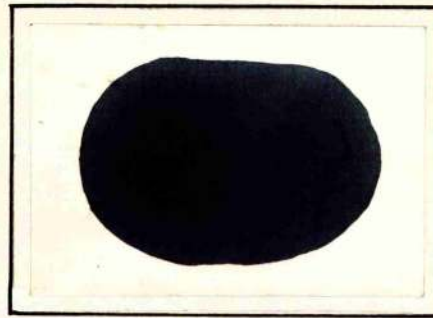
Plate 8 e. 'As compared with six months ago the antero-posterior film shows little change. The lateral view shows the root shadow less extensive and there is less peribronchial congestion.

As compared with two years ago the antero-posterior film shows little change in either quantity or quality of root shadow.'

(one quarter natural size)

Fig. 8.At First Examination

A-P. diameter 4.50 inches.
L. diameter 7.00 inches.

Fig. 8 a.At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.25 inches.

Circumference of Chest During Quiet Respiration

20 inches.

21 inches.

AVERAGE CLOTHING

86

(Male. 2 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Boatee	Wool	Pants	Cotton
Pants	Wool		
Shoes and socks.		Sandals and socks.	

Outer clothing

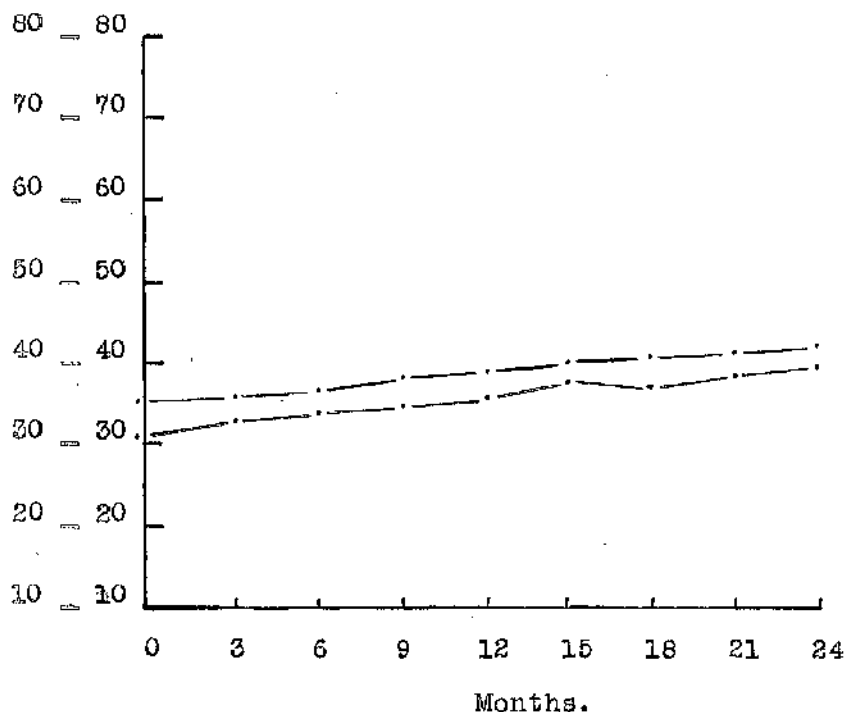
WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Suit	Cotton
Trousers	Wool		
Coat	Tweed		
Leggings	Wool		
Cap.		No cap.	

Overclothed: No.
 Constriction of chest due to clothing: None.
 Interference with circulation due to clothing: None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



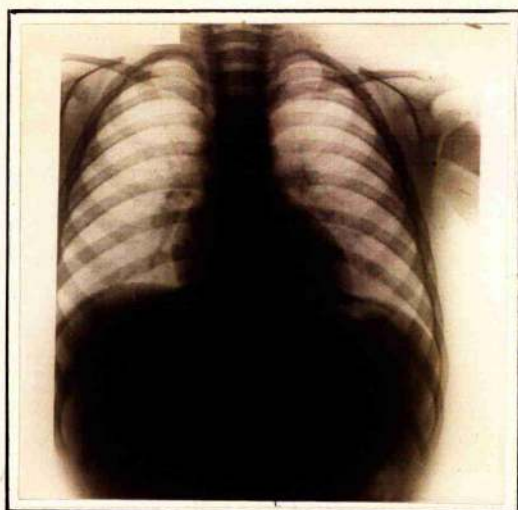


Plate 8. At First Examination.

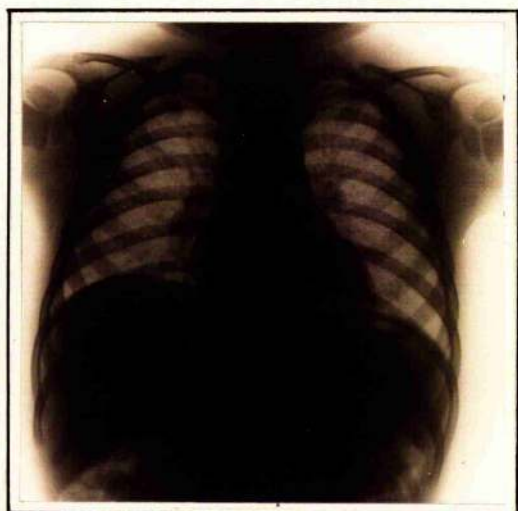


Plate 8 a. At Three Months.

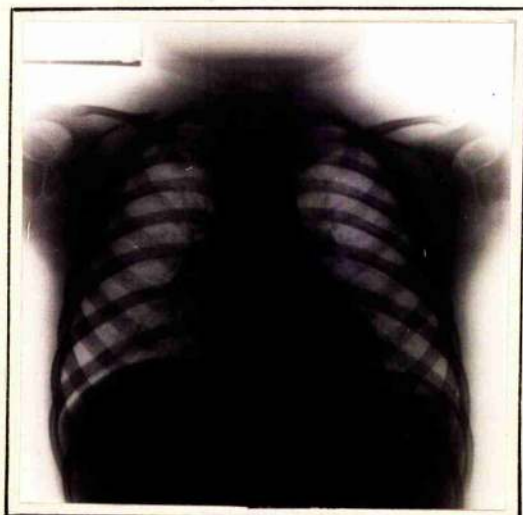


Plate 8 b. At Six Months.

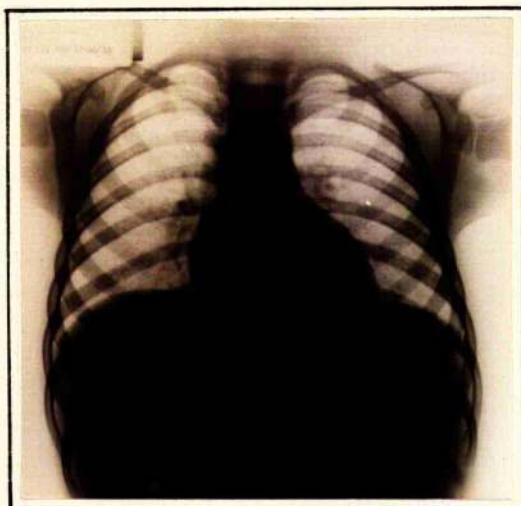


Plate 8 c. At One Year.

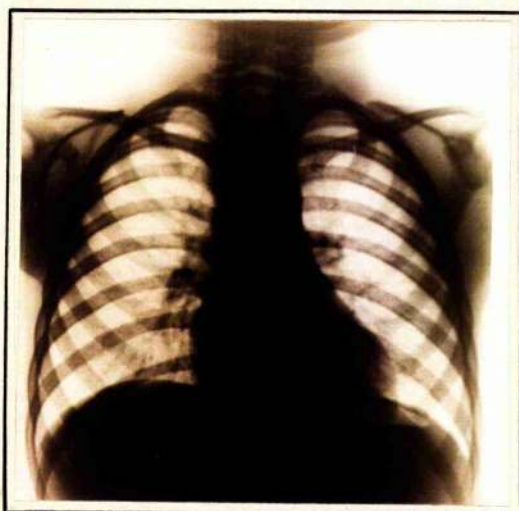


Plate 8 d. At Eighteen Months.

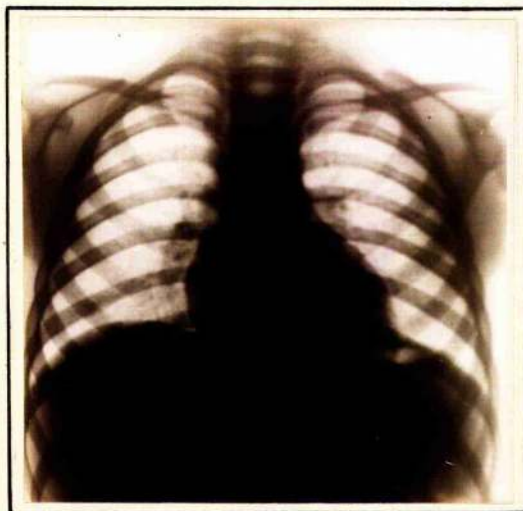


Plate 8 e. At Two Years.

Name. M.R. Sex. Female. Age. 7 years.

Date of Birth. 2/4/37

Feeding. Cow's milk (not boiled) as mother did not wish to breast feed.

Family History. Parents are alive and well. One sister aged fourteen years is healthy. No family history of tuberculosis.

Previous Illnesses

Measles January, 1943.
Whooping cough February, 1944.

Environment and Parental Care. The family resides in a three apartment house in the centre of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

April, 1944.

(7 years)

Height and Weight. 49.5 inches. 54 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition, except (4) in upper jaw and (5) in lower jaw, which are decayed.

Teeth in upper jaw: 654321 1-3456
Teeth in lower jaw: 65432- 1234-6
Total number of teeth: 21

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, pneumococci, staphylococci (aureus) and streptococci, including haemolytic strains.

Haematology.

Erythrocytes 5,240,000 per c.mm.
Leucocytes 18,579 per c.mm.
Haemoglobin 87 per cent. Colour Index 0.83

Differential Leucocyte Count:-

Neutrophils 45.75 per cent. (8,600 per c.mm.)
Eosinophils 1.25 per cent. (232 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 49.75 per cent. (9,234 per c.mm.)
Monocytes 3.25 per cent. (503 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	14	34	44	8	0

Physical Examination of Chest. Muscular development good. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 22.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 8 inches. Skin texture fine. The anterior superficial veins extending from sternum to left shoulder are prominent. No enlarged glands. Slight dullness between last cervical and upper two dorsal vertebrae. Breath sounds vesicular,

except between spine and scapulae where they are bronchovesicular, and more marked on right than on left side. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Bronchial breathing heard to same level. Eustace Smith's sign was absent. An occasional cough.

Bacteriological Examination of Sputum. A mixed flora including pneumococci and diphtheroids. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 9. 'Broad chest, regular and symmetrical. Heart normal in size.

Right lung: Root diffusely enlarged with enlargement of all lymph nodes. Generalised soft increase of lung striation, suggesting a degree of congestion.

Left lung: Similar root enlargement, but only central glands showing a degree of enlargement. Similar soft increase of lung striation.

Right lateral: Thickening of root shadow; all glands prominent. Increased striation present, but not so marked in lateral view, mostly into upper and lower lobes. Dome of diaphragm flattened slightly.'

SUBSEQUENT EXAMINATIONS

In June the child had a cough for two weeks, especially after lying down in bed at night.

At Three Months (July, 1944)

(7 years 3 months)

Height and Weight. 50 inches (increase of 0.5 inch). 53 pounds (loss of 1 pound).

Physical Examination of Chest. The anterior superficial veins over upper part of left side of chest less prominent. Slight dullness over first and second dorsal vertebrae. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough at night.

Radiographic Findings

Plate 9 a. 'Root shadows slightly less in extent. Gland masses smaller and more defined. Lung striation remains. Lateral view shows definite diminution in root shadow.'

At Six Months (October, 1944)

(7 years 6 months)

Height and Weight. 50.75 inches (increase of 0.75 inch). 53 pounds (no gain).

Physical Examination of Chest. Anterior superficial veins still prominent. On percussion and auscultation no abnormal-

ity was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) patch test was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 9 b. 'Marked improvement in root shadow which is smaller in extent. Glands are now small and firm and some have disappeared. Lung striation still increased but much less than in previous films.'

Lateral view shows root shadow clearing. Numerous small firm glands in tracheo-bronchial and bronchial groups.'

In February the child had mumps and in March she had tonsillitis.

At One Year (April, 1945)

(8 years)

Height and Weight. 51.5 inches (increase of 0.75 inch). 53 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human) and tuberculin jelly patch tests were positive. Vollmer patch test (bovine) was negative.

Radiographic Findings

Plate 9 c. 'As compared with April, 1944, there is much improvement. The generalised peribronchial congestion has been reduced considerably, the lung striation being increased only a little beyond normal (town) limits. The root shadows have settled down too, and the gland groups, right upper, mid and lower bronchial and left upper bronchial, show much better definition.'

Lateral view confirms the firming of the glands with diminution in the peribronchial congestion, particularly at the periphery of the lung fields.'

In September the child had a cough for two weeks, especially after lying down in bed at night.

At Eighteen Months (October, 1945)

(8 years 6 months)

Height and Weight. 52.75 inches (increase of 1.25 inches). 59 pounds (gain of 6 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's was absent. No cough.

Tuberculin Skin Tests. Vollmer (human) and tuberculin jelly patch tests were positive. Vollmer patch test (bovine) was negative.

Radiographic Findings

Plate 9 d. 'Very slight general diminution in extent of the root shadow compared with six months ago. Lung striation remains unchanged in amount.

Lateral view shows glands of the upper bronchial group to be firming.'

The child has kept well and has had no cough for the past six months.

At Two Years (April, 1946)

(9 years)

Height and Weight. 53.5 inches (increase of 0.75 inch).
63 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human) and tuberculin jelly patch tests were positive. Vollmer patch test (bovine) was negative.

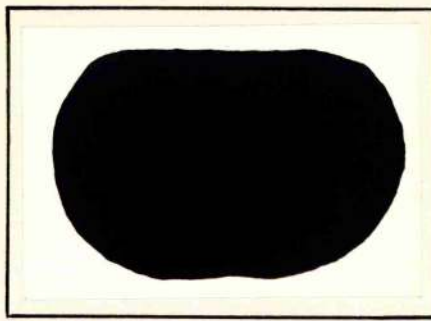
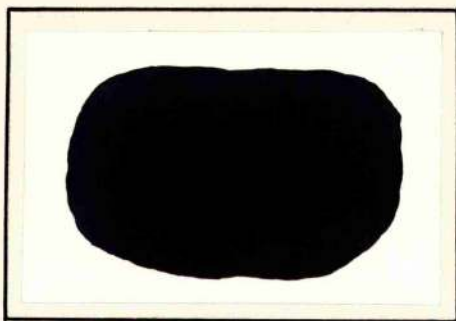
Radiographic Findings

Plate 9 e. 'As compared with six months ago there is no obvious change to be noted in the antero-posterior film. The lateral view shows reduction in amount of shadowing around bronchial roots.

As compared with two years ago the root shadows remain diffusely enlarged, but the individual gland masses are not so prominent, this reduction in size being general. The increase in lung striation remains practically unchanged. Lateral view shows a definite clearing of congestion around the hilar regions.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 9.At First Examination

A-P. diameter 5.00 inches.
L. diameter 8.00 inches.

Fig. 9 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

22.50 inches.

24.00 inches.

(Female. 7 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Knickers	Silk
Knickers	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Dress	Wool	Dress	Cotton
Cardigan	Wool		
Coat	Nap		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

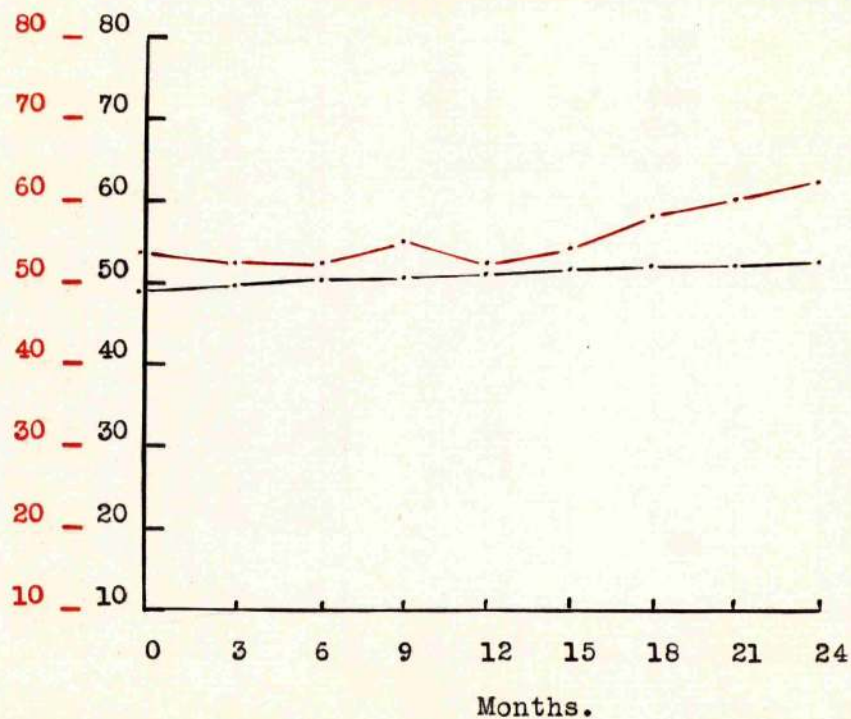
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



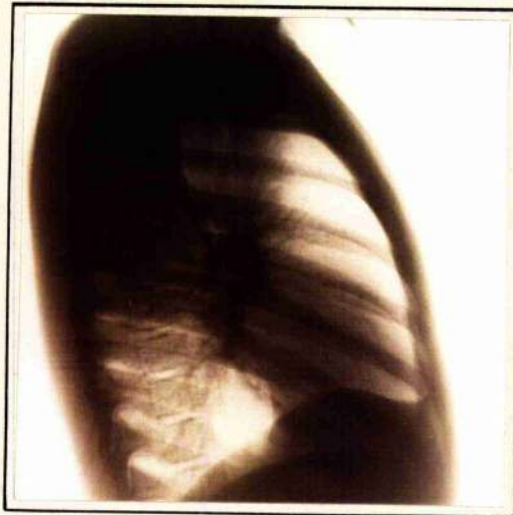
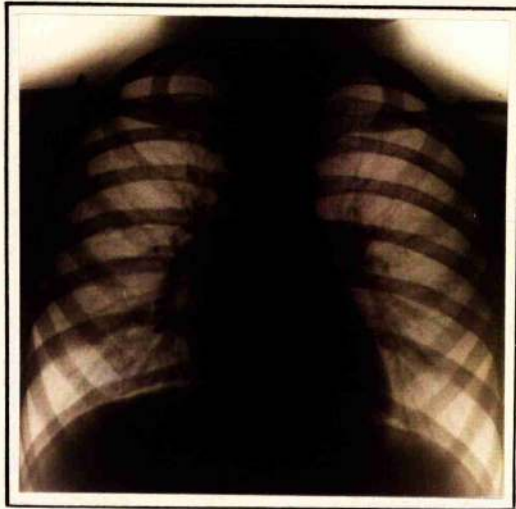


Plate 9. At First Examination.

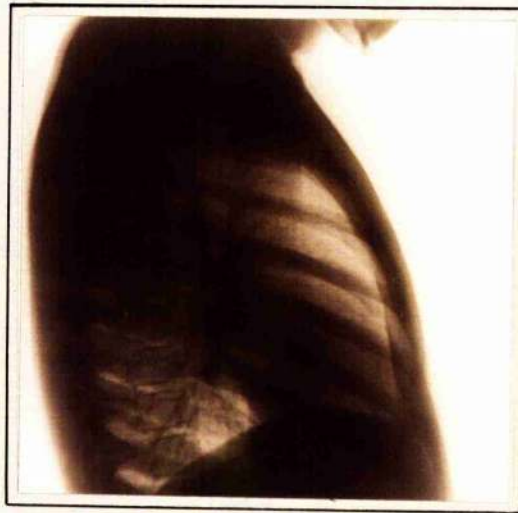
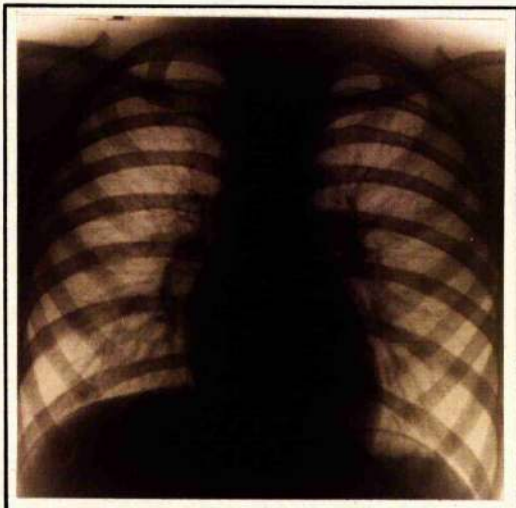


Plate 9 a. At Three Months.

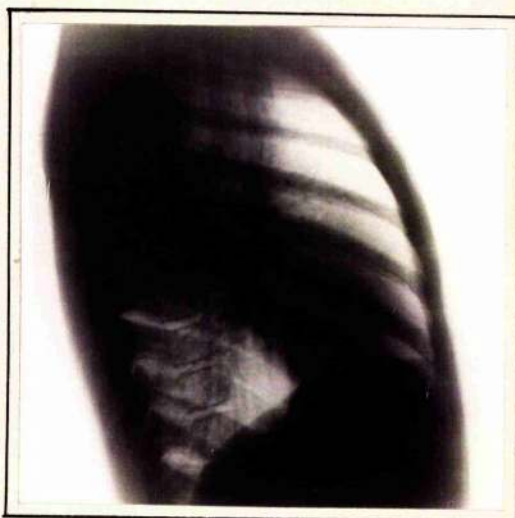
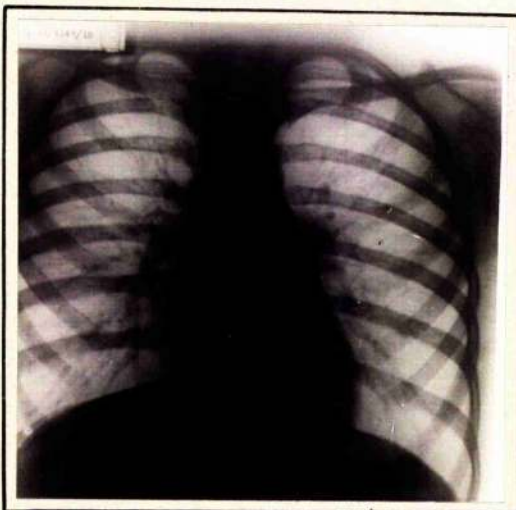


Plate 9 b. At Six Months.

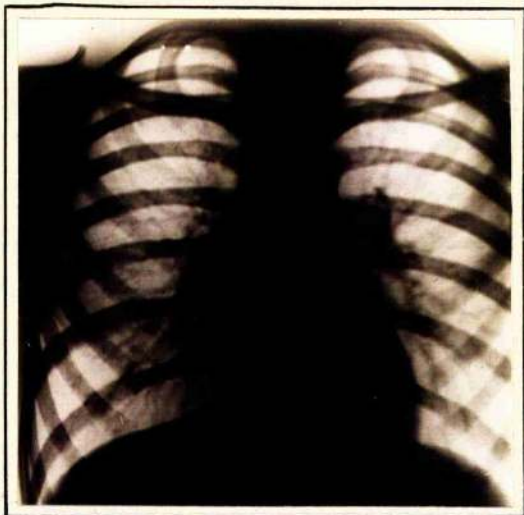


Plate 9 c. At One Year.

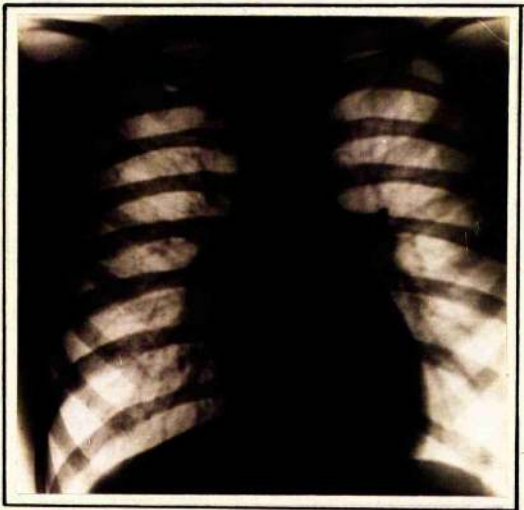


Plate 9 d. At Eighteen Months.

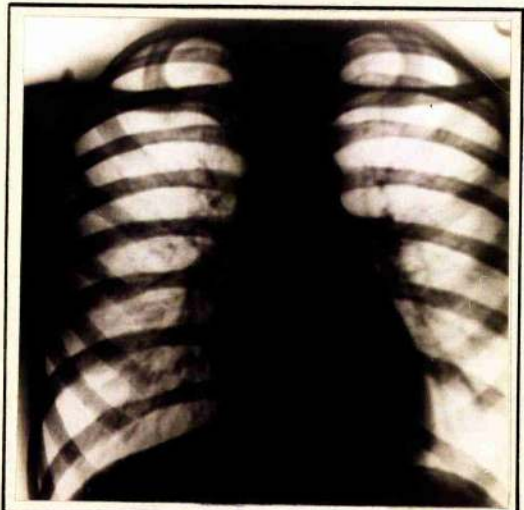


Plate 9 e. At Two Years.

Name. E. McK. Sex. Female. Age. 6 years 3 months.

Date of Birth. 4/1/38

Feeding. At breast for nine months.

Family History. Parents are alive and well. One sister aged eleven years three months is healthy. No family history of tuberculosis.

Previous Illnesses

Tonsillitis August, 1943.
Whooping cough March, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

April, 1944.

(6 years 3 months)

Height and Weight. 46 inches. 54 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 654321 123456
Teeth in lower jaw: 654321 123456
Total number of teeth: 24

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, diphtheroids, pneumococci and streptococci.

Haematology.

Erythrocytes 5,080,000 per c.mm.
Leucocytes 12,500 per c.mm.
Haemoglobin 80 per cent. Colour Index 0.80

Differential Leucocyte Count:-

Neutrophils 34.50 per cent. (4,332 per c.mm.)
Eosinophils 3.25 per cent. (406 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 57.75 per cent. (7,218 per c.mm.)
Monocytes 4.50 per cent. (562 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	30	39	27	4	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 23.75 inches. Antero-posterior diameter 6 inches. Lateral diameter 8 inches. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace

Smith's sign was absent. An occasional cough and whoop, especially after running.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 10. 'Chest rather barrell shaped, being broad apically but symmetrical. Heart normal.

Right lung: Diffuse enlargement of root shadow with well defined upper bronchial glands and less well defined glandular masses in central hilar area. Increased striation upwards and downwards from root.

Left lung: Root shadow not so prominent. Slight striation into upper lung field.

Lateral view emphasises barrell shape of chest. Glandular masses prominent, especially those around lower bronchi. Prominence of upper bronchi and basal bronchi.'

SUBSEQUENT EXAMINATIONS

In June the child had measles.

At Three Months (July, 1944)

(6 years 6 months)

Height and Weight. 47 inches (increase of 1 inch).
56 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest, extending towards both shoulders. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 10 a. 'Slight diminution in intensity of root shadow, although no definite decrease in size. The glands visible are more firm than in previous film, especially those along upper lobe bronchi.'

At Six Months (October, 1944)

(6 years 9 months)

Height and Weight. 47.25 inches (increase of 0.25 inch).
56 pounds (no gain).

Physical Examination of Chest. Anterior superficial veins less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 10 b. 'There is an increase in the lung striation and the glands appear slightly larger. This would suggest an exacerbation of catarrhal condition.'

Lateral view confirms increase of striation generally.'

At One Year (April, 1945)

(7 years 3 months)

Height and Weight. 48.5 inches (increase of 1.25 inches).
60 pounds (gain of 4 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest are prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 10 c. 'As compared with the films of one year ago, the present film shows a definite increase in perihilar congestion. The root shadows right and left are more diffuse and softer in appearance. The gland groups along the upper and lower bronchioles both right and left, are less well defined in outline. The lung striation is generally increased, more particularly into the right base, as also into left upper zone, where there is soft shadowing along the line of the first interspace.'

Lateral view shows the right lower bronchial glands larger and more diffuse.'

At Eighteen Months (October, 1945)

(7 years 9 months)

Height and Weight. 50 inches (increase of 1.5 inches).
68 pounds (gain of 8 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 10 d. 'Definite improvement noted. Diminution in right basal striation. Diminution in right root shadow generally with hardening of glands along right upper lobe bronchi.'

? Small hard primary focus of tuberculosis at level of second costal cartilage.

Slight improvement in left root shadow, especially at upper pole. Less marked peribronchial congestion into upper lobe.

Lateral view shows slight improvement generally.'

In January the child had a nasal catarrh for a week.

At Two Years (April, 1946)

(8 years 3 months)

Height and Weight. 51.5 inches (increase of 1.5 inches).
74 pounds (gain of 6 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins over upper part of chest not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

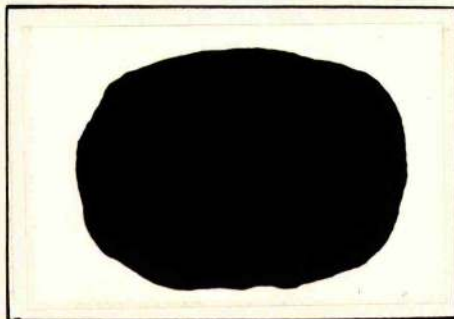
Radiographic Findings

Plate 10 e. 'As compared with six months ago there is no change noted.'

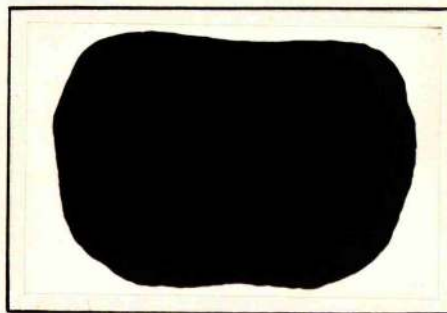
As compared with two years ago there is little change noted in the antero-posterior film. The lateral view shows less root congestion and better definition of glands along right lower lobe bronchi.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 10.At First Examination

A-P. diameter 6.00 inches.
L. diameter 8.00 inches.

Fig. 10 a.At Two Years

A-P. diameter 6.00 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

23.75 inches.

26.50 inches.

(Female. 6 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Knickers	Wool	Knickers	Cotton
Shoes and stockings.		Shoes and socks.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Frock	Cotton
Skirt	Tweed		
Coat	Tweed		
Hat.		No hat.	

Overclothed:

No.

Constriction of chest due to clothing:

None.

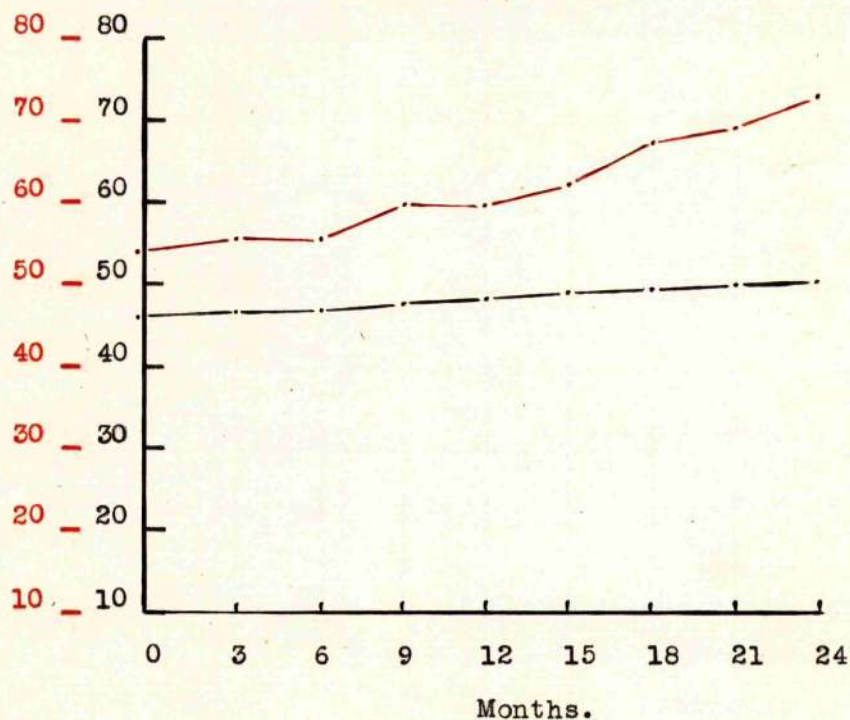
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



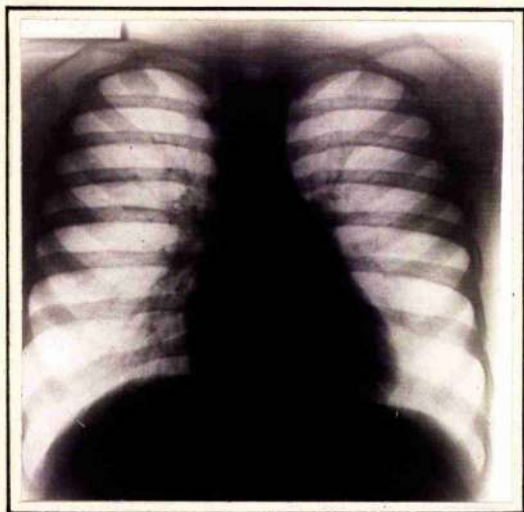


Plate 10. At First Examination.

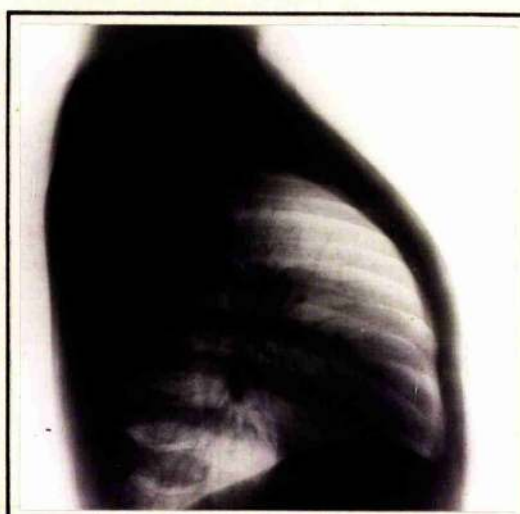
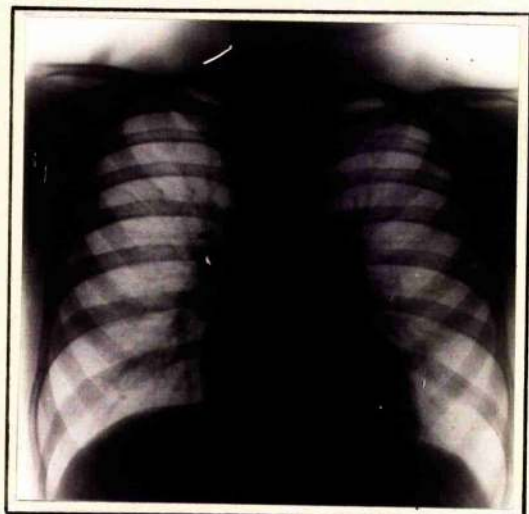


Plate 10 a. At Three Months.

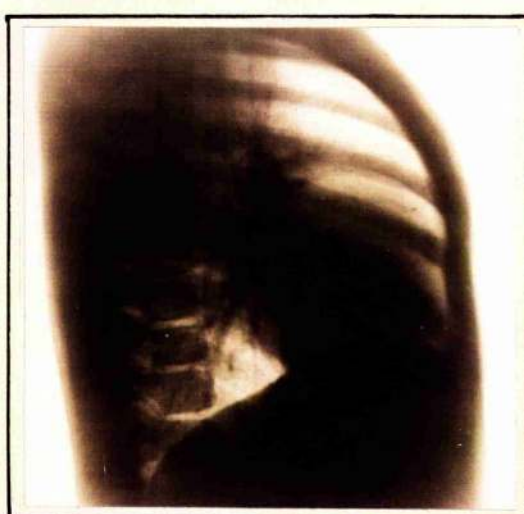
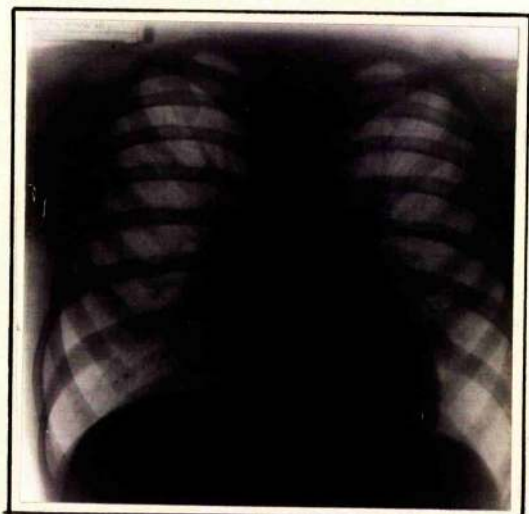


Plate 10 b. At Six Months.

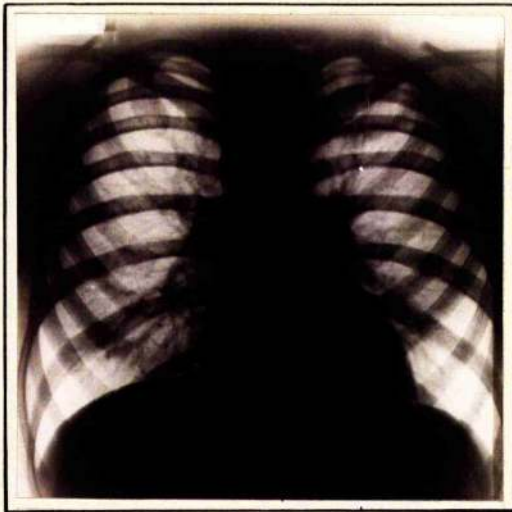


Plate 10 c. At One Year.

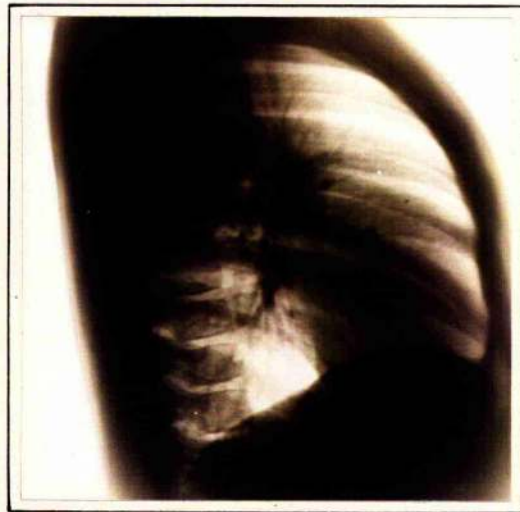


Plate 10 d. At Eighteen Months.

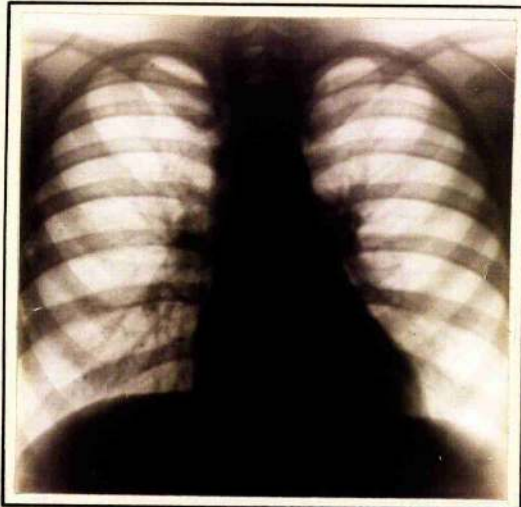


Plate 10 e. At Two Years.

Name. R.R. Sex. Male. Age. 3 years 3 months.

Date of Birth. 8/1/41.

Feeding. At breast for ten days and thereafter fed on Cow and Gate as mother developed mastitis.

Family History. Parents are alive and well. Only child. No family history of tuberculosis.

Previous Illnesses

Tonsillitis March, 1941.

Whooping cough March, 1944.

Environment and Parental Care. The family resides in a self-contained house on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

April, 1944.

(3 years 3 months)

Height and Weight. 38 inches. 37 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 54321 12345

Teeth in lower jaw: 54321 12345

Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, diphtheroids, staphylococci and streptococci.

Haematology

Erythrocytes 5,480,000 per c.mm.

Leucocytes 18,000 per c.mm.

Haemoglobin 90 per cent. Colour Index 0.83

Differential Leucocyte Count:-

Neutrophils 42.25 per cent. (7,605 per c.mm.)

Eosinophils 1.50 per cent. (270 per c.mm.)

Basophils 0.00 per cent. (0 per c.mm.)

Lymphocytes 54.25 per cent. (9,765 per c.mm.)

Monocytes 2.00 per cent. (360 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	10	26	54	9	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 21 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 11. 'Chest tends to be broad in shape, regular and symmetrical.'

Right lung: Diffuse enlargement of root shadow with enlargement of lower bronchial glands. Lung tissue clear save at cardio-phrenic angle where there is some soft striation.

Left lung: Similar root shadow with enlargement of central glands. Lung tissue clearer.

Lateral view shows increased striation into posterior basal zone.'

SUBSEQUENT EXAMINATIONS

At Three Months (July, 1944)

(3 years 6 months)

Height and Weight. 39 inches (increase of 1 inch).
38 pounds (gain of 1 pound).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 11 a. 'Root shadows remain diffusely enlarged and there is little change either quantitatively or qualitatively.'

In September the child had a cough for two weeks, especially after lying down in bed at night.

At Six Months (October, 1944)

(3 years 9 months)

Height and Weight. 40.25 inches (increase of 1.25 inches).
39 pounds (gain of 1 pound).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 11 b. 'Lung striation remains unchanged in extent, but shows a change in its appearance. It is softer, less well defined and generally congested. The gland masses share in the loss of definition.'

The lateral view confirms changes in appearance of lung striation and shows increase into posterior basal zone.'

In December and again in January the child had bronchial catarrh which lasted for ten days on each occasion.

At One Year (April, 1945)

(4 years 3 months)

Height and Weight. 41 inches (increase of 0.75 inch).
41 pounds (gain of 2 pounds).

Physical Examination of Chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 11 c. 'Apart from the growth during the past year, the films show little change, either quantitatively or qualitatively in the appearance of the root shadows and lung fields. The right lateral view shows a slight improvement in the general peribronchial congestion.'

In September the child had bronchitis for ten days.

At Eighteen Months (October, 1945)

(4 years 9 months)

Height and Weight. 42.75 inches (increase of 1.75 inches).
42 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of the anterior superficial veins on right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 11 d. 'No change in appearance of root and lung shadows.'

In December and again in February and March the child had a cough, which lasted for ten days on each occasion, especially after lying down in bed at night.

At Two Years (April, 1946)

(5 years 3 months)

Height and Weight. 44.5 inches (increase of 1.75 inches).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 11 e. 'As compared with six months ago the root shadows are unchanged, but there is an improvement in the lung fields generally.

As compared with two years ago the root shadow remains unchanged in quantity but in quality is firmer and less congested. In particular, the right upper and mid-bronchial glands and the left upper bronchial group are smaller and harder. The lung fields, too, show less peribronchial congestion than was evident two years ago.

Lateral view confirms marked reduction in congestion around bronchial tree.'

CYRTOMETER TRACINGS

(one quarter natural size)

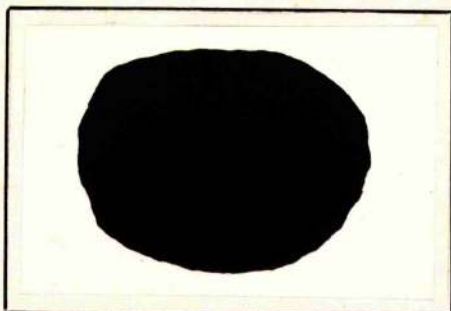


Fig. 11.

At First Examination

A-P. diameter 5.50 inches.
L. diameter 7.00 inches.

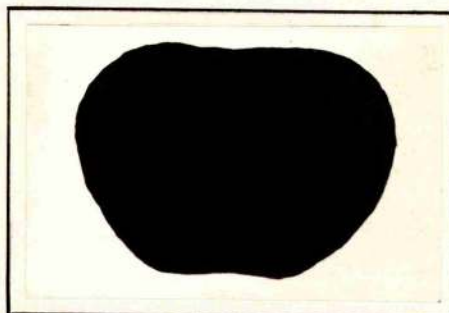


Fig. 11 a.

At Two Years

A-P. diameter 5.50 inches. A-P. diameter 5.50 inches.
L. diameter 7.50 inches. L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

21.00 inches.

23.00 inches.

(Male. 3 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool	Pants	Wool

Shoes and socks.

Shoes and no socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Suit	Cotton
Trousers	Flannel		
Coat	Tweed		
Pantaloon	Corduroy		

No cap.

No cap.

Overclothed:

Constriction of chest due to clothing:

No.

None.

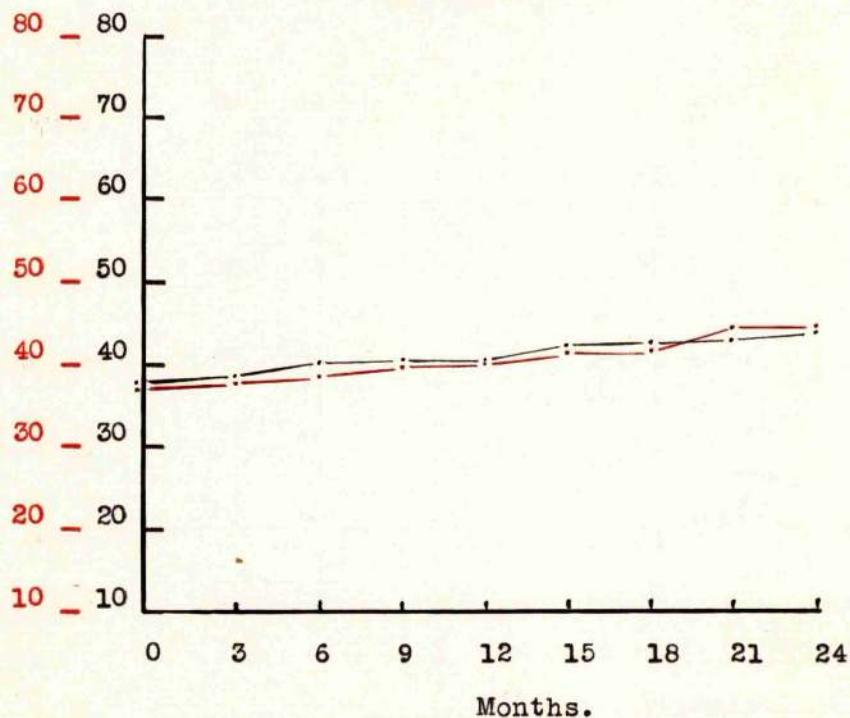
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



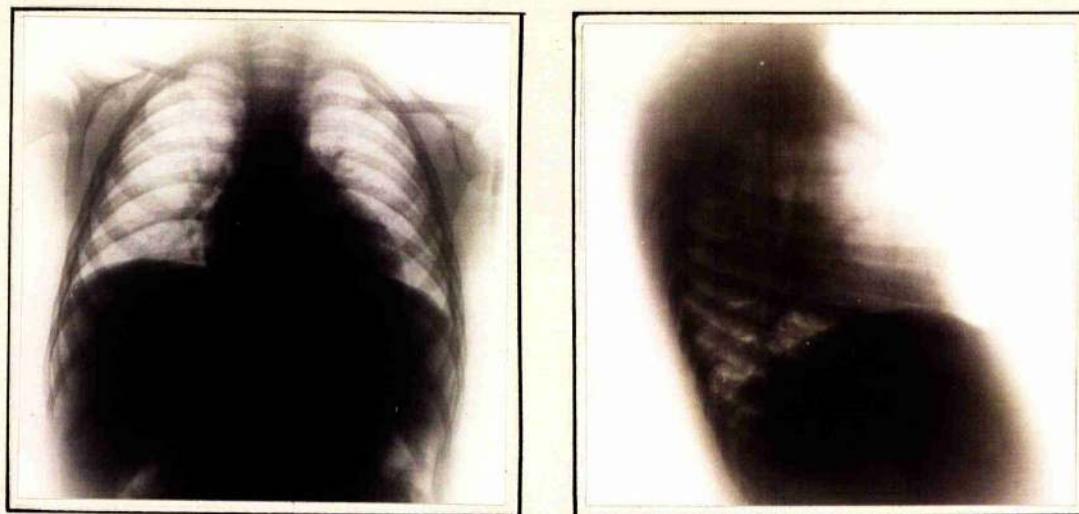


Plate 11. At First Examination.

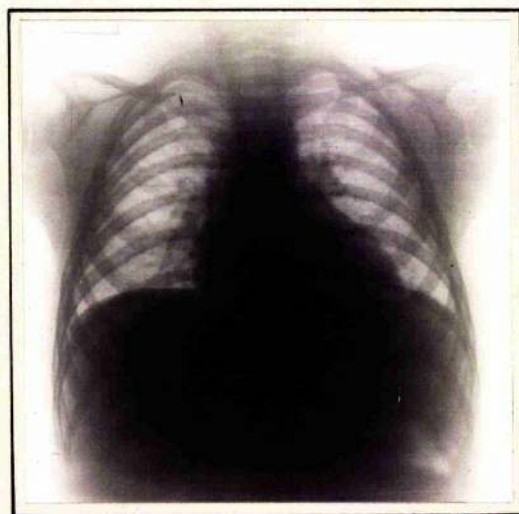


Plate 11 a. At Three Months.

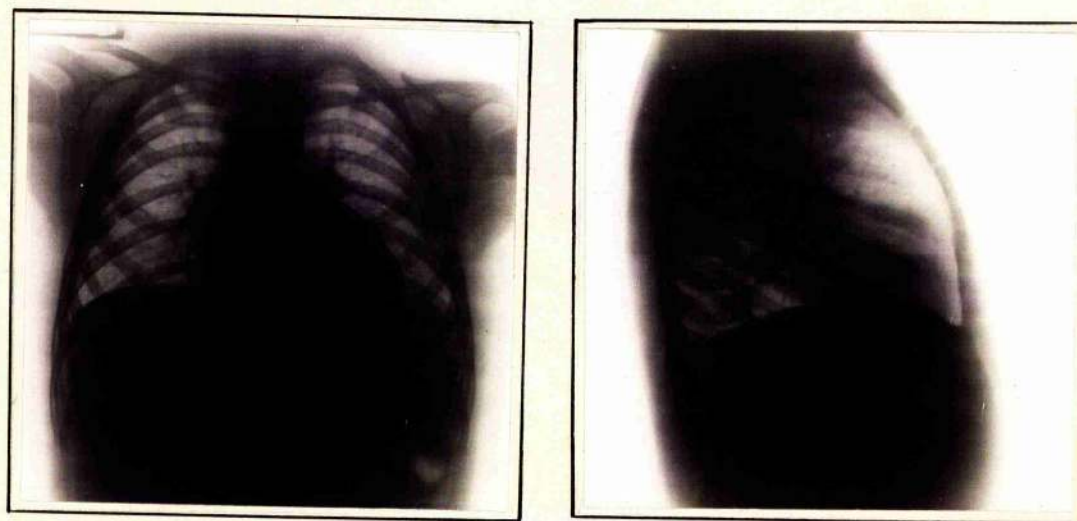


Plate 11 b. At Six Months.

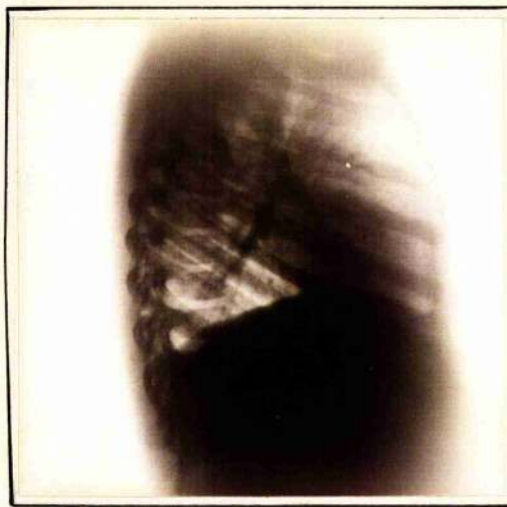
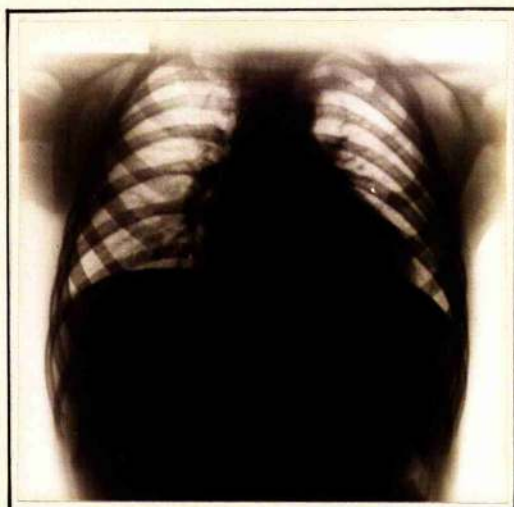


Plate 11 c. At One Year.

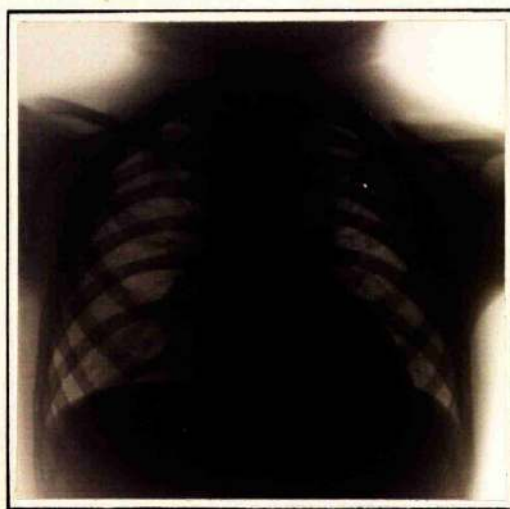


Plate 11 d. At Eighteen Months.

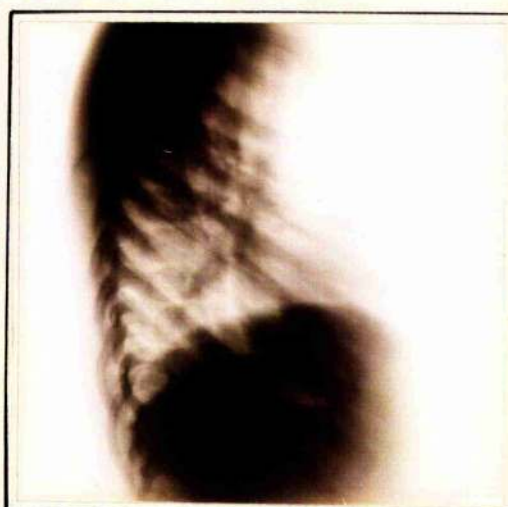
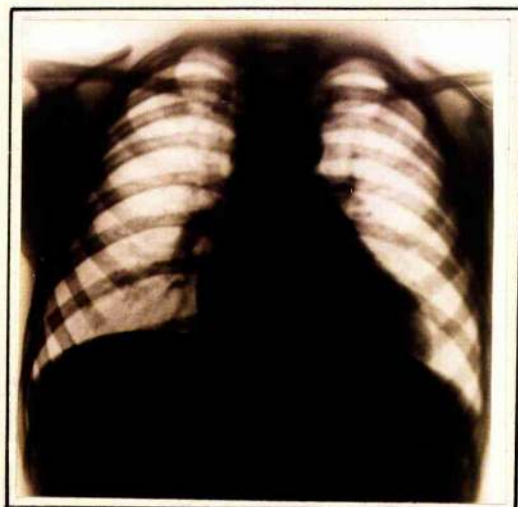


Plate 11 e. At Two Years.

Name. N.T. Sex. Female. Age. 6 years 2 months.

Date of Birth. 16/3/38.

Feeding. At breast for two weeks and thereafter fed on Sister Laura's Food when lactation stopped.

Family History. Parents are alive and well. One brother aged thirteen years is healthy. One brother aged one year two months has whooping cough (case 13). No family history of tuberculosis.

Previous Illnesses

Chickenpox	August, 1940.
Measles	December, 1942.
Whooping cough complicated by german measles in fourth week	March, 1944.

Environment and Parental Care. The family resides in a two room and kitchen house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

May, 1944.

(6 years 2 months)

Height and Weight. 46.5 inches. 44 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci and streptococci.

Haematology.

Erythrocytes	5,240,000 per c.mm.
Leucocytes	13,600 per c.mm.
Haemoglobin 75 per cent.	Colour Index 0.72

Differential Leucocyte Count:-

Neutrophils	53.75 per cent. (7,310 per c.mm.)
Eosinophils	1.75 per cent. (238 per c.mm.)
Basophils	0.00 per cent. (0 per c.mm.)
Lymphocytes	39.50 per cent. (5,372 per c.mm.)
Monocytes	5.00 per cent. (680 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per Cent.	21	36	40	3	0

Physical Examination of Chest. Muscular development poor. Scapulae winged. No spinal deformity. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 6.75 inches. Skin texture coarse. Enlargement of anterior superficial veins over upper part of chest extending towards both shoulders. No enlarged

glands. Percussion note clear. Breath sounds vesicular. A few scattered moist sounds heard throughout chest. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 12. 'Chest regular, symmetrical and well shaped. Heart normal.'

Right lung: Root shadow is diffusely enlarged. Small glands are visible in all parts of hilum. Slight increase of lung striation throughout, more prominent into basal zone.

Left lung: Nodular root shadow with enlargement of upper bronchial glands. Slight increase of lung striation, especially into infraclavicular zone and basally.

Lateral view shows scattered upper bronchial glands visible. A large glandular mass of lower bronchial glands. Bronchial increase into upper lobe and posterior basal zone.'

SUBSEQUENT EXAMINATIONS

In July the child had mumps.

At Three Months (August, 1944)

(6 years 5 months)

Height and Weight. 47.25 inches (increase of 0.75 inch). 45 pounds (gain of 1 pound).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 12 a. 'Root shadow remains unchanged. Slight reduction in amount of lung striation.'

Lateral view shows reduction in root shadow.'

In September the child had her tonsils and adenoids removed.

At Six Months (November, 1944)

(6 years 8 months)

Height and Weight. 47.75 inches (increase of 0.5 inch). 50 pounds (gain of 5 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 12 b. 'Improvement in root shadow and gland masses. The latter are much harder in appearance and firmer in outline. The basal striation persists and compared with August films is softer and suggests a peribronchial congestion. Lateral view shows well firmed glands.'

In February the child had a cough for ten days, especially after lying down in bed at night.

At One Year (May, 1945)

(7 years 2 months)

Height and Weight. 49.25 inches (increase of 1.5 inches). 55 pounds (gain of 5 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 12 c. 'Root shadow and lung striation remains the same in amount. The right and left upper bronchial glands are smaller and more defined. The right lower lobe bronchi continue to show some surrounding congestion.

Lateral view confirms the better definition of glands generally.'

In June the child had bronchial catarrh for a week.

At Eighteen Months (November, 1945)

(7 years 8 months)

Height and Weight. 50.75 inches (increase of 1.5 inches). 58 pounds (gain of 3 pounds).

Physical Examination of Chest. No enlargement of anterior superficial veins. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 12 d. 'As compared with that of six months ago the antero-posterior film shows a slight generalised increase in congestion. The root shadows and lung striation are not increased in amount, but are softer in appearance.'

In February the child had bronchial catarrh which lasted for ten days.

At Two Years (May, 1946)

(8 years 2 months)

Height and Weight. 51.75 inches (increase of 1 inch). 61 pounds (gain of 3 pounds).

Physical Examination of Chest. Marked enlargement of anterior superficial veins over upper part of both sides of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

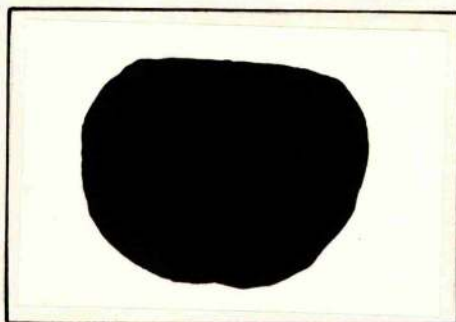
Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 12 e. 'Compared with six months ago there is no change. Compared with two years ago the antero-posterior plate shows little change. The lateral shows a little diminution in amount of root congestion, but gland masses remain the same.'

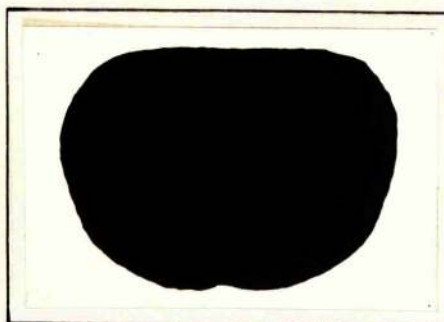
CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 12.At First Examination

A-P. diameter 5.50 inches.

L. diameter 6.75 inches.

Fig. 12 a.At Two Years

A-P. diameter 5.75 inches.

L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

21.50 inches.

24.00 inches.

(Female. 6 years 2 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Knickers	Wool	Knickers	Silk

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Frock	Cotton
Skirt	Wool		
Coat	Nap		
Scarf	Wool		

Hat.

No hat.

Overclothed:

Constriction of chest due to clothing:

No.

None.

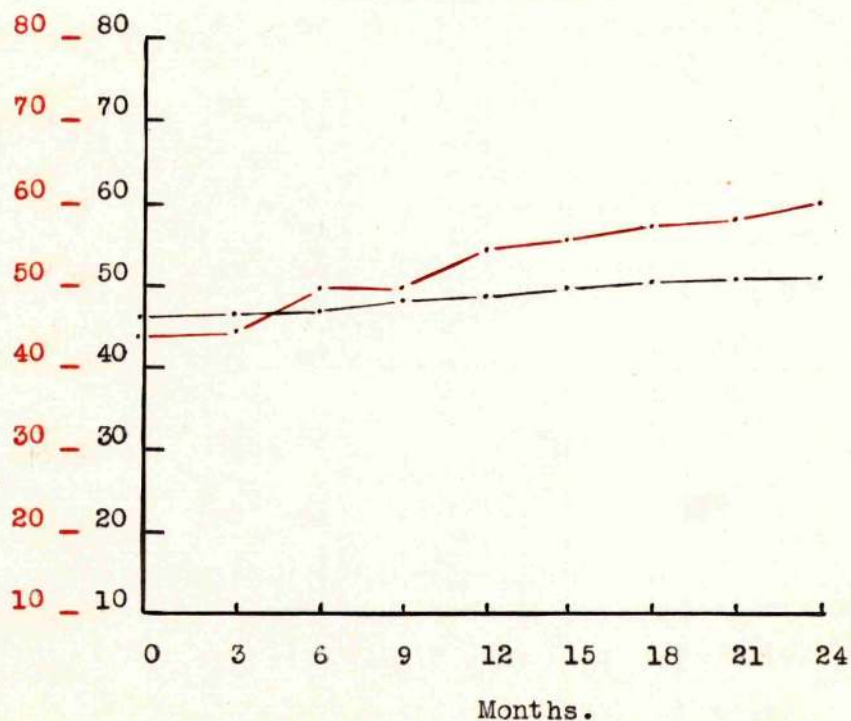
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



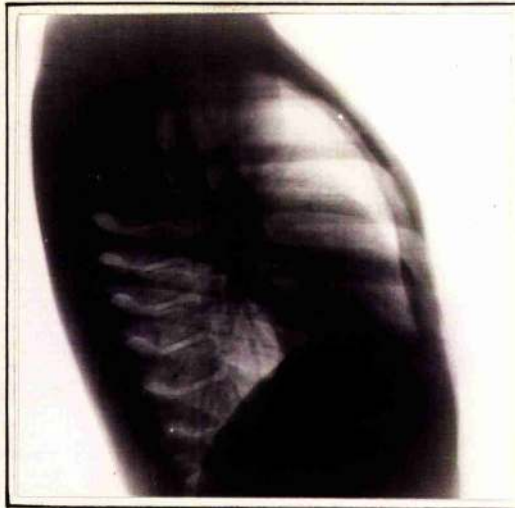
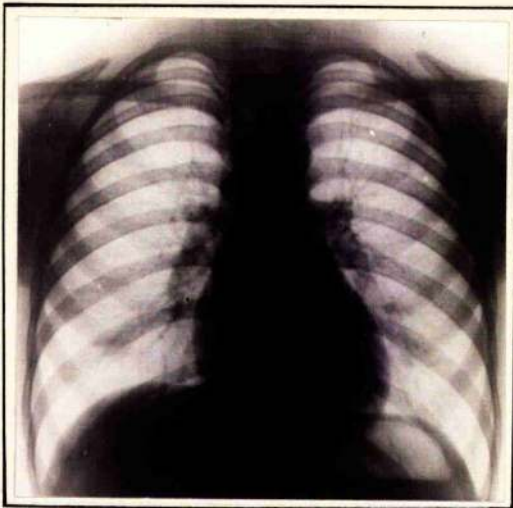


Plate 12. At First Examination.

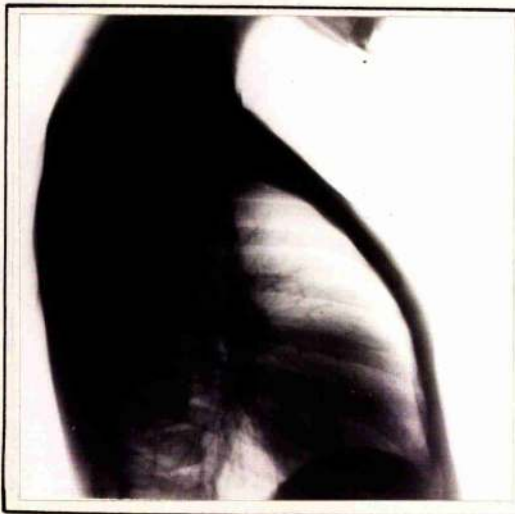
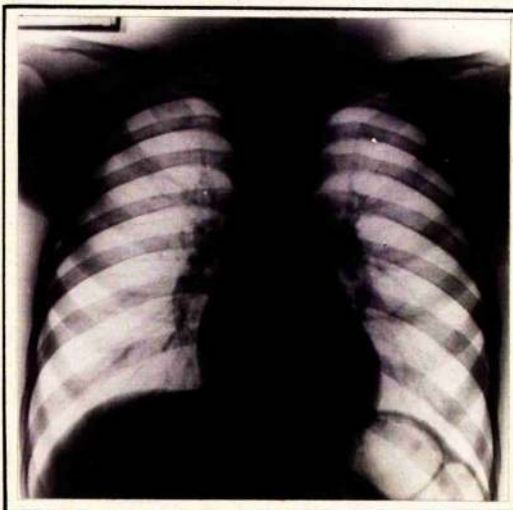


Plate 12 a. At Three Months.

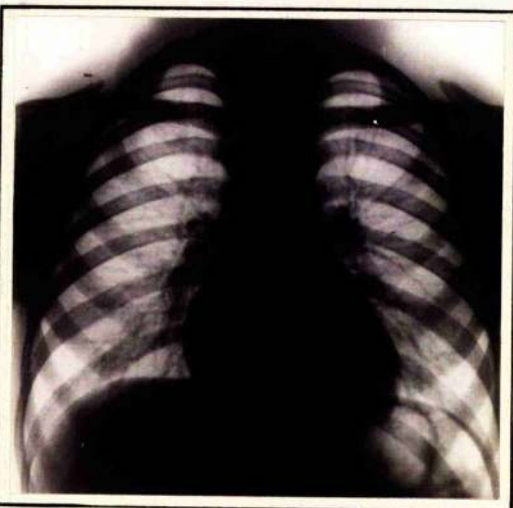


Plate 12 b. At Six Months.

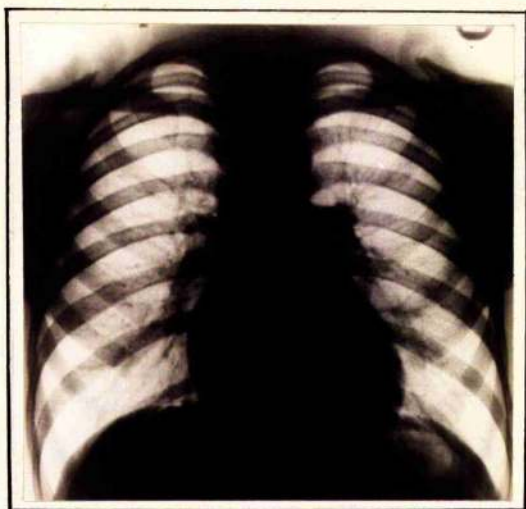


Plate 12 c. At One Year.

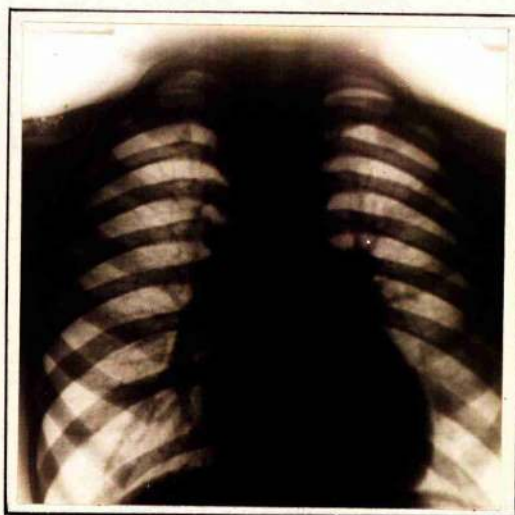


Plate 12 d. At Eighteen Months.

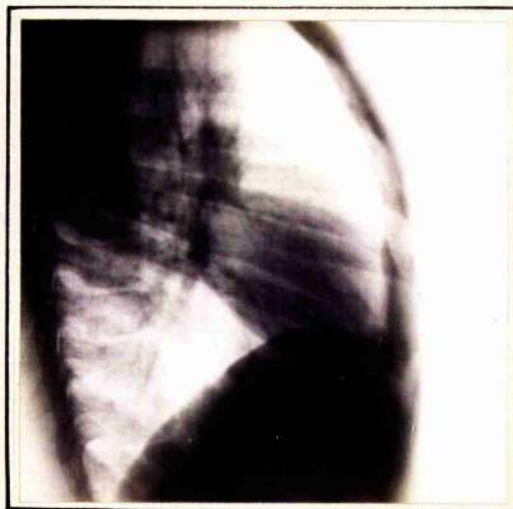
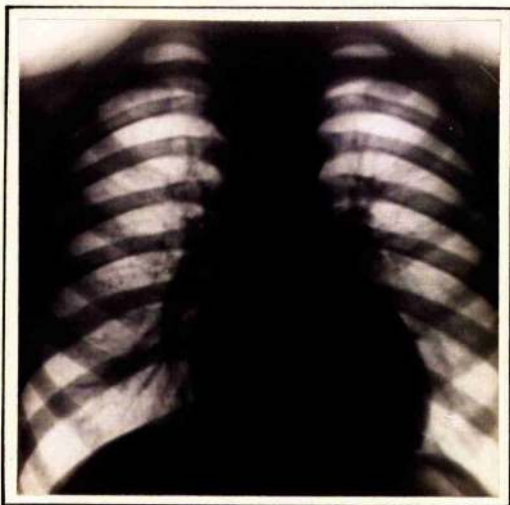


Plate 12 e. At Two Years.

No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Radiographic Findings

Plate 13. 'Chest not central. Not very clear. Definite increased root shadows, right and left. Glandular masses present centrally on right. Lung striation increased.'

SUBSEQUENT EXAMINATIONS

At Three Months (August, 1944)

(1 year 6 months)

Height and Weight. 31 inches (increase of 0.5 inch).
26 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Radiographic Findings

Plate 13 a. 'Slight movement of patient. Despite this the lungs, especially the right lung, appear clearer than before.'

At Six Months (November, 1944)

(1 year 9 months)

Height and Weight. 32 inches (increase of 1 inch).
28 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 13 b. 'Little change noted in comparison with previous films.'

In February the child had a cough for ten days, especially after lying down in bed at night.

At One Year (May, 1945)

(2 years 3 months)

Height and Weight. 34.5 inches (increase of 2.5 inches).
28 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior super-

ficinal veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 13 c. 'No individual gland masses are now seen. The lung fields are much clearer, the linear markings being within normal limits.'

In October the child had nasal catarrh for three weeks, with an occasional cough, especially after lying down in bed at night.

At Eighteen Months (November, 1945)

(2 years 9 months)

Height and Weight. 36.5 inches (increase of 2 inches). 31 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 13 d. 'Much root congestion remains, and the peribronchial congestion is also general. The glands along the right and left upper lobe bronchi are showing early signs of hardening.'

In December and again in February and April the child had a cough, especially after lying down in bed at night. The cough lasted for ten days on each occasion.

At Two Years (May, 1946)

(3 years 3 months)

Height and Weight. 37.75 inches (increase of 1.25 inches). 34 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 13 e. 'Compared with six months ago the root and peribronchial congestion is now a little more marked.'

Compared with two years ago the root shadows remain diffuse but do show a diminution in the amount of congestion around the bronchi. In particular there is firming of the glands along

the left upper lobe bronchi. The lung striation is neither so markedly increased nor so softly outlined.'

CYRTOMETER TRACINGS

(one quarter natural size)

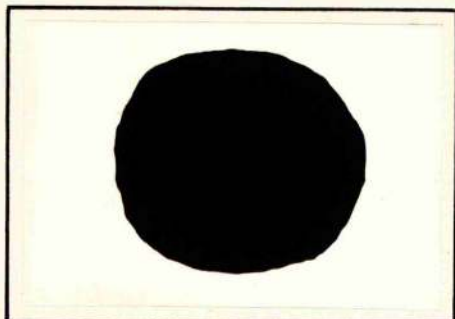


Fig. 13.

At First Examination

A-P. diameter 5.50 inches.
L. diameter 6.00 inches.

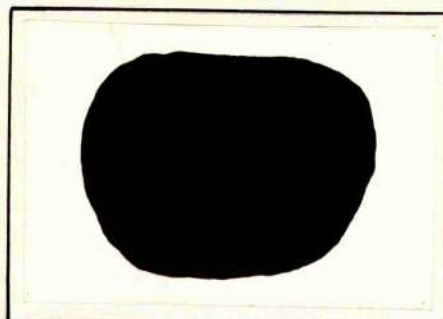


Fig. 13 a.

At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

19.50 inches.

21.50 inches.

(Male. 1 year 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Wool	Bodice	Wool

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Blouse	Silk
Trousers	Wool	Trousers	Cotton
Coat	Wool		
Pantaloon	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

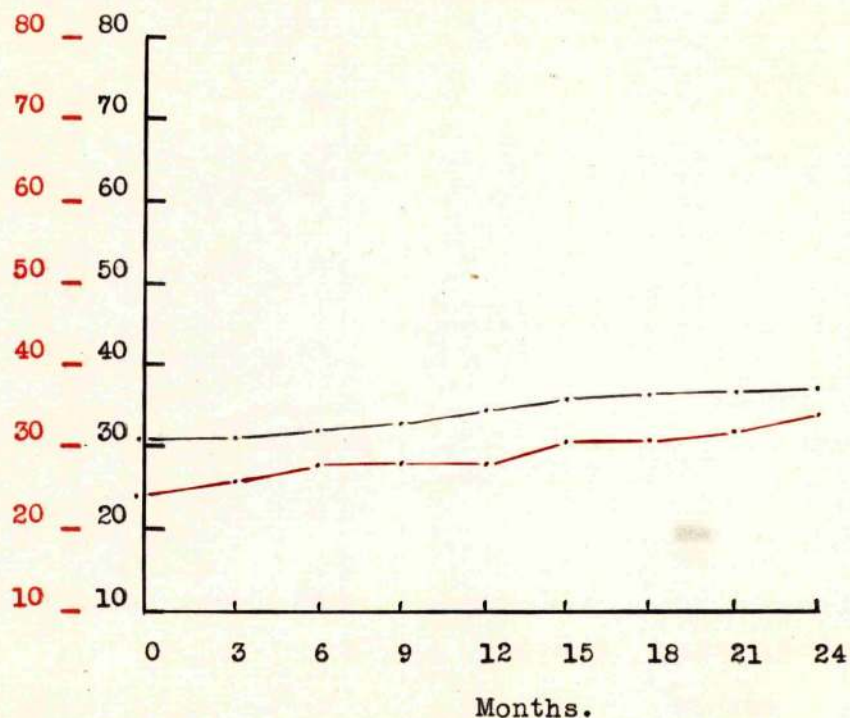
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



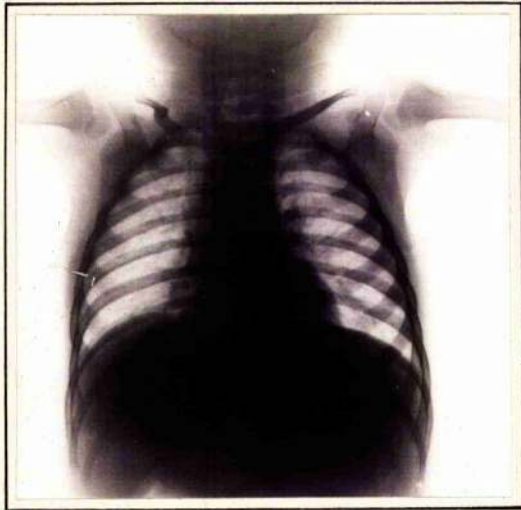


Plate 13. At First Examination.

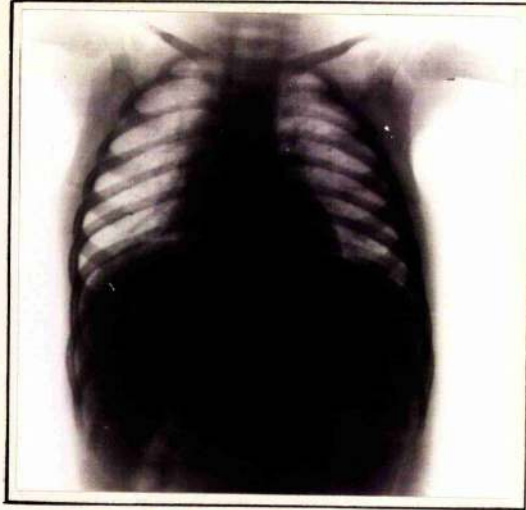


Plate 13 a. At Three Months.

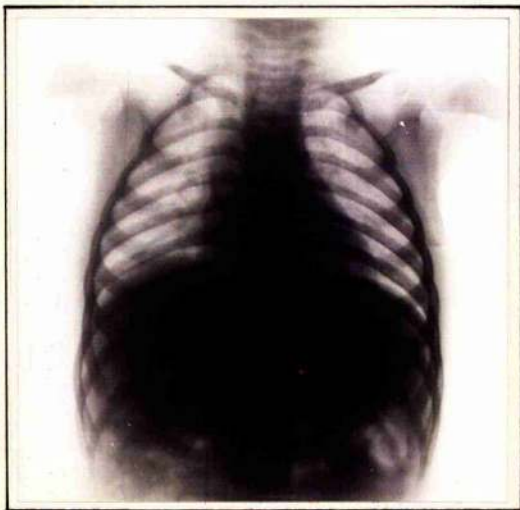


Plate 13 b. At Six months.

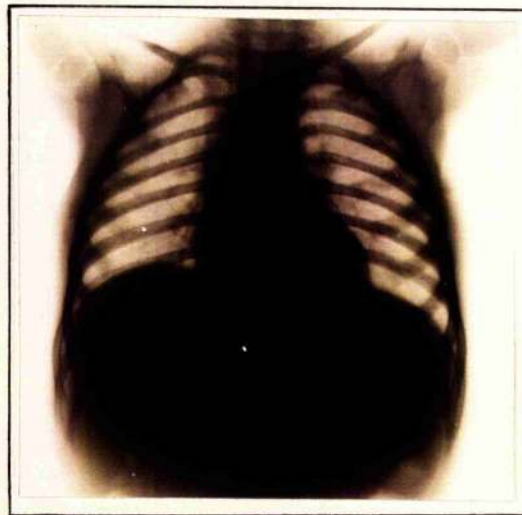


Plate 13 c. At One Year.

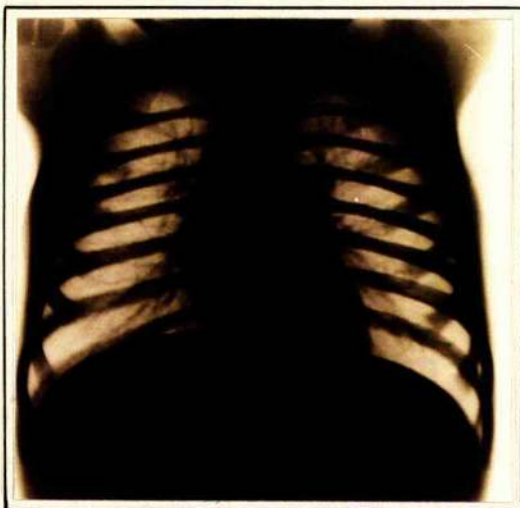


Plate 13 d. At Eighteen Months.

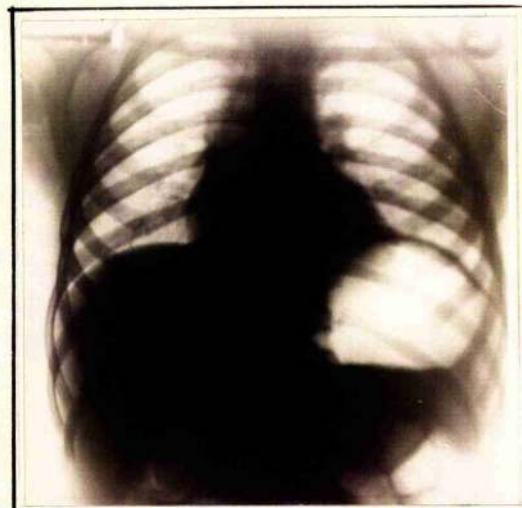


Plate 13 e. At Two Years.

Name. J.G. Sex. Male. Age. 1 year 6 months.

Date of Birth. 12/11/42

Feeding. At breast for three months and thereafter fed on Cow and Gate when lactation stopped.

Family History. Parents are alive and well. One sister died of whooping cough when two years of age. No family history of tuberculosis.

Previous Illnesses

Influenza November, 1943.
Whooping cough April, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

May, 1944.

(1 year 6 months)

Height and Weight. 35 inches. 29 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 4-21 12-4
Teeth in lower jaw: 4-21 12-4
Total number of teeth: 12

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, streptococci, pneumococci and diphtheroid types.

Haematology

Erythrocytes 5,550,000 per c.mm.
Leucocytes 14,066 per c.mm.
Haemoglobin 90 per cent. Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils 24.75 per cent. (3,481 per c.mm.)
Eosinophils 3.75 per cent. (527 per c.mm.)
Basophils 0.25 per cent. (35 per c.mm.)
Lymphocytes 69.25 per cent. (9,740 per c.mm.)
Monocytes 2.00 per cent. (281 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	5	22	60	12	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 4.5 inches. Lateral diameter 6.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesic-

ular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. A very occasional cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 14. 'Good broad type of chest, regular in shape. Heart normal.'

Right lung: Root shadow increased with enlargement of tracheo-bronchial and lower bronchial glands. Striation increased into basal zone. Diaphragm regular.

Left lung: Root shadow extends upwards with enlargement of glands along upper bronchial tree and increase of striation into that area. Diaphragm regular.'

SUBSEQUENT EXAMINATIONS

At Three Months (August, 1944)

(1 year 9 months)

Height and Weight. 36 inches (increase of 1 inch).
32 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 14 a. 'Little change in radiological appearance.'

At Six Months (November, 1944)

(2 years)

Height and Weight. 36.75 inches (increase of 0.75 inch).
35 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running and after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 14 b. 'A slight improvement is noted in the root shadow, particularly in the upper poles and the upper lobe bronchi.'

In April the child had a cough for two weeks, especially after lying down in bed at night.

At One Year (May, 1945)

(2 years 6 months)

Height and Weight. 39 inches (increase of 2.25 inches).
40 pounds (gain of 5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 14 c. 'Root shadows remain as diffuse as in the film of May, 1944. There is, however, a slight improvement in the general appearance of the lung fields.'

At Eighteen Months (November, 1945)

(3 years)

Height and Weight. 40.75 inches (increase of 1.75 inches).
42 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 14 d. 'No change noted in appearance of root shadow. Slight increase in amount of right basal striation in cardiophrenic angle.'

At Two Years (May, 1946)

(3 years 6 months)

Height and Weight. 42.75 inches (increase of 2 inches).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 14 e. 'The right basal peribronchial congestion has improved in the past six months, but that extending into the left upper lobe is rather more marked.

Compared with two years ago the root shadow remains diffuse and there is still peribronchial congestion extending into right basal zone and to a lesser extent into left upper zone. The

gland masses have not yet completely lost their soft outline.'

CYRTOMETER TRACINGS
(one quarter natural size)

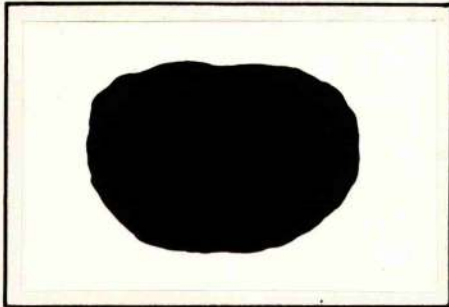


Fig. 14.

At First Examination

A-P. diameter 4.50 inches.
L. diameter 6.50 inches.

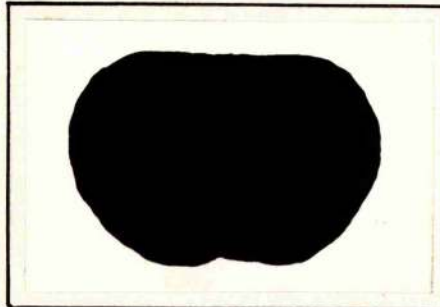


Fig. 14 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

20.00 inches.

22.50 inches.

(Male. 1 year 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Wool	Pants	Cotton
Pants	Cotton		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Jersey	Wool	Trousers	Cotton
Trousers	Wool		
Coat	Tweed		
Pantaloon	Velvet		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

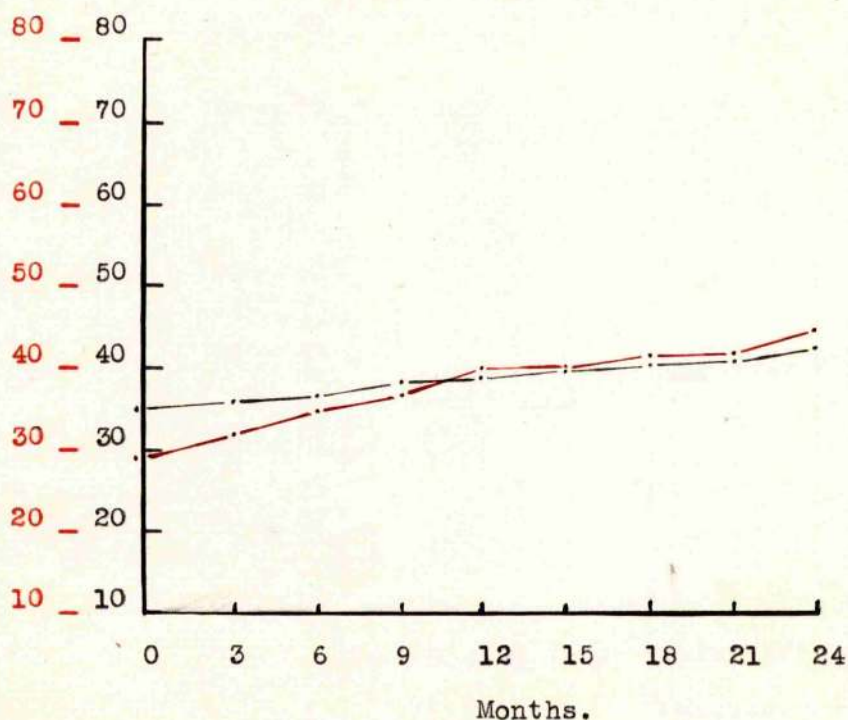
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



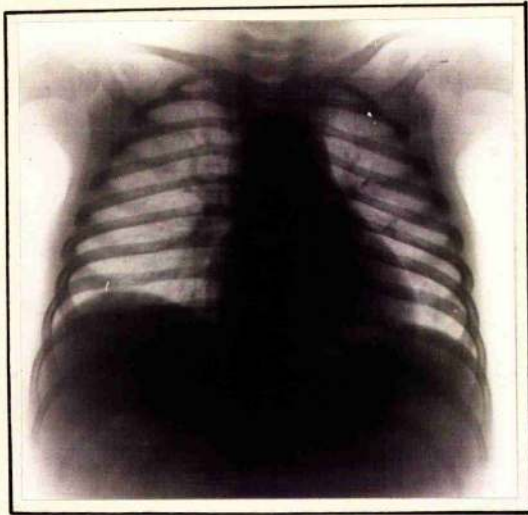


Plate 14. At First Examination.

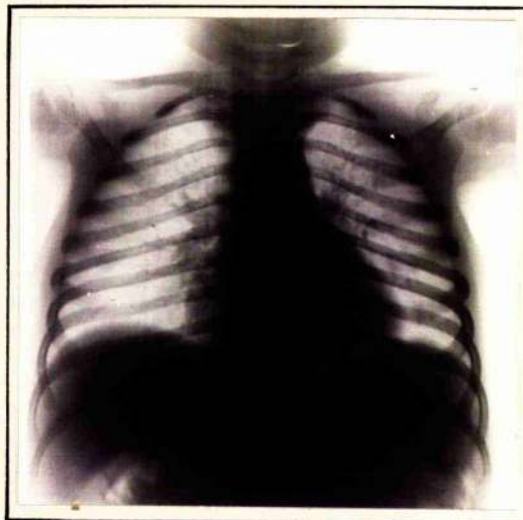


Plate 14 a. At Three Months.

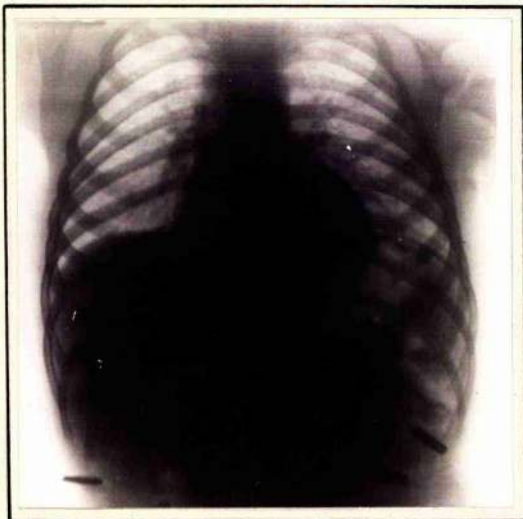


Plate 14 b. At Six Months.

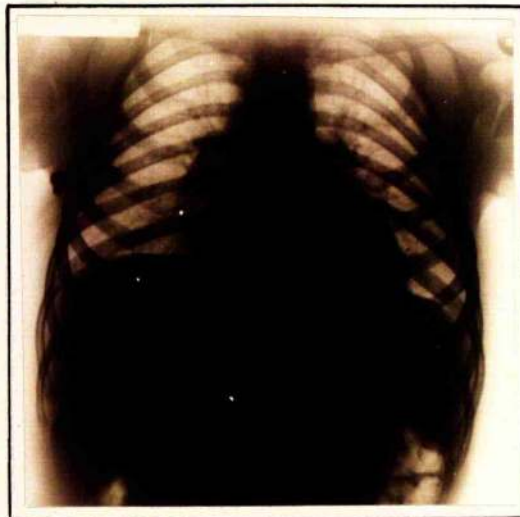


Plate 14 c. At One Year.

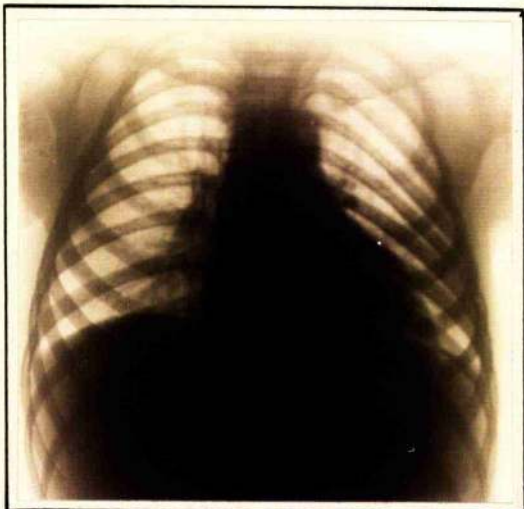


Plate 14 d. At Eighteen Months.

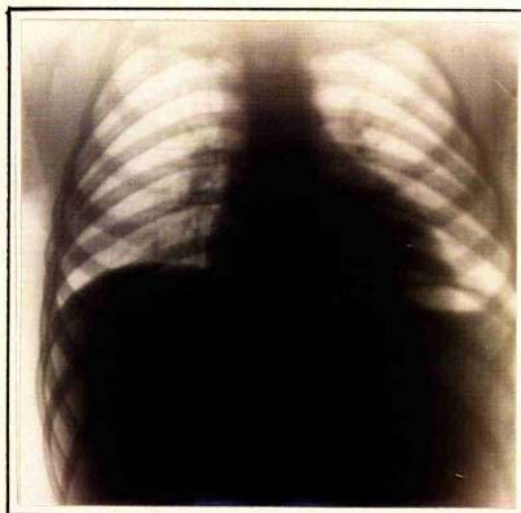


Plate 14 e. At Two Years.

Name. B.M. Sex. Female. Age. 7 years.

Date of Birth. 30/8/37.

Feeding. Cow's milk (not boiled) as mother had post-partum haemorrhage and was unable to breast feed.

Family History. Parents are alive and well. One brother aged eight years is healthy. One brother aged five years eleven months has measles (case 38). One sister aged one year six months is healthy. No family history of tuberculosis.

Previous Illnesses

Measles September, 1939.
Whooping cough July, 1944.

Environment and Parental Care. The child resides with her grandmother in a one apartment house in the centre of a town. The windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(7 years)

Height and Weight. 43.25 inches. 34 pounds.

Mouth and Teeth. Tongue moist and clean. Two decayed teeth (4 and 4) in upper jaw and one (5) in lower jaw. Remainder in good condition.

Teeth in upper jaw: -54321 123456
Teeth in lower jaw: 65-321 123--6
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, coliform bacilli and streptococci.

Haematology.

Erythrocytes 4,940,000 per c.mm.
Leucocytes 18,933 per c.mm.
Haemoglobin 80 per cent. Colour Index 0.83

Differential Leucocyte Count:-

Neutrophils 49.50 per cent. (9,371 per c.mm.)
Eosinophils 3.50 per cent. (662 per c.mm.)
Basophils 0.50 per cent. (94 per c.mm.)
Lymphocytes 44.50 per cent. (8,425 per c.mm.)
Monocytes 2.00 per cent. (378 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	27	37	30	5	1

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture rough. Very slight enlargement of anterior superficial veins

over upper part of right side of chest. No enlarged glands. Slight dullness over first and second dorsal vertebrae. Breath sounds vesicular and harsh, especially over right side of chest anteriorly. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including Gram-positive cocci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 15. 'Well formed chest with normal heart shadow.

Right lung: Root, one small gland in upper bronchial group, well defined and hard. More glands with soft outline in central root region. Generalised increase of striation with definite thickening of basal bronchial tree.

Left lung: Increase of bronchial tree into left upper lobe.

Lateral view shows central gland masses. Basal striation thickened.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944)

(7 years 3 months)

Height and Weight. 43.75 inches (increase of 0.5 inch).
36 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running and after lying down in bed at night.

Radiographic Findings

Plate 15 a. 'General improvement.

Right lung: Root shadow less diffuse; bronchial glands are more defined and smaller. Those along upper lobe bronchi have almost disappeared. Basal striation less.

Left lung: Root shadow less diffuse with firmer bronchial glands. Striation into upper lobe is less marked.

Lateral view shows much less congestion in root, and diminution in basal striation.'

At Six Months (February, 1945)

(7 years 6 months)

Height and Weight. 44 inches (increase of 0.25 inch).
37 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended

to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 15 b. 'Slight increase of root, periglandular and peribronchial congestion generally as compared with November, 1944.'

In July the child had her tonsils and adenoids removed.

At One Year (August, 1945)

(8 years)

Height and Weight. 45 inches (increase of 1 inch). 38 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 15 c. 'Little change generally, save that right upper mid-bronchial glands are rather smaller and firmer.

Lateral view confirms better definition of right upper, mid-bronchial glands, which are decreased in size.

Note interlobar pleural thickening surrounding mid lobe.'

At Eighteen Months (February, 1946)

(8 years 6 months)

Height and Weight. 45.75 inches (increase of 0.75 inch). 40 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was present. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 15 d. 'Root shadow remains unchanged in extent. The left upper bronchial gland is definitely harder and the increased lung striation is diminishing.

Lateral view shows right bronchial glands unchanged.'

At Two Years (August, 1946)

(9 years)

Height and Weight. 46.50 inches (increase of 0.75 inch). 41 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was present. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 15 e. 'Improvement generally is to be noted, even in the last six months, in the amount of general peribronchial congestion.

Lateral view shows peribronchial congestion still clearing.

As compared with two years ago the root shadows are firmer in appearance and also less dense in extent. In particular, there is a marked improvement in the gland shadows along the right lower lobe bronchi. Some slight increased lung striation remains generally, but is now less marked.

Lateral view shows a great diminution in the general peribronchial congestion.'

CYRTOMETER TRACINGS

(one quarter natural size)

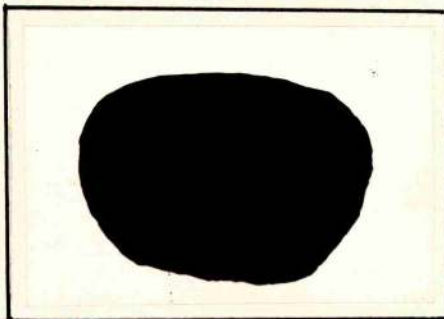


Fig. 15.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

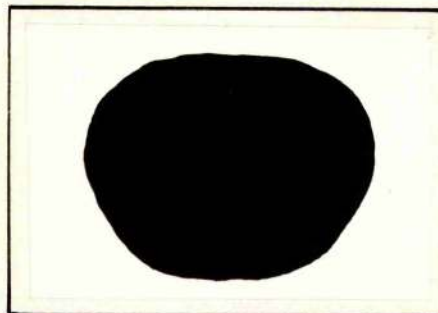


Fig. 15 a.

At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

20 inches.

22 inches.

(Female. 6 years 11 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Cotton	Bodice	Cotton
Knickers	Flannel	Knickers	Cotton
Petticoat	Cotton	Petticoat	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jersey	Wool	Frock	Cotton
Skirt	Tweed		
Coat	Tweed		
Scarf	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

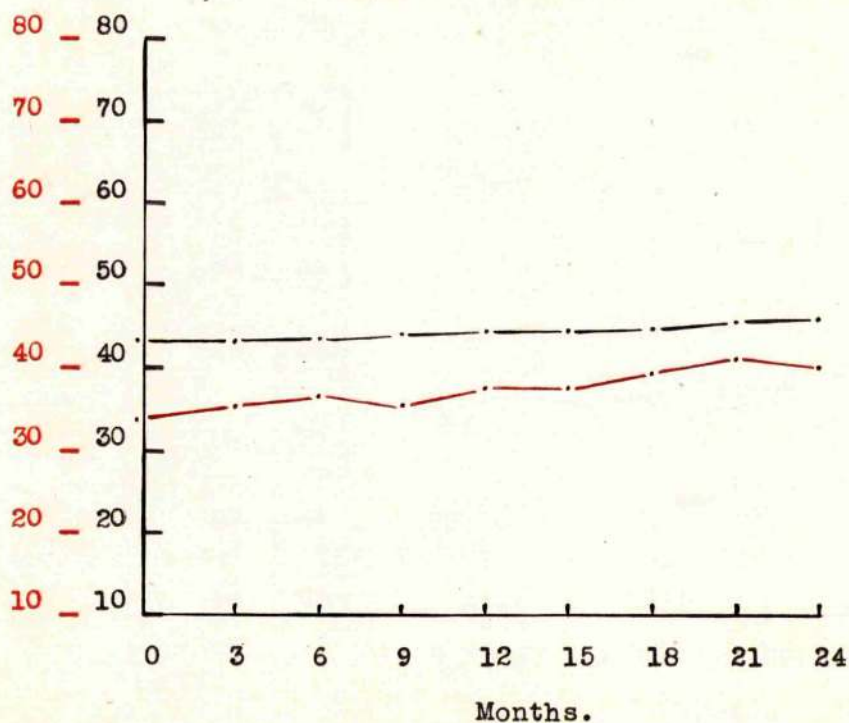
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months.

Height in inches.

Weight in pounds.



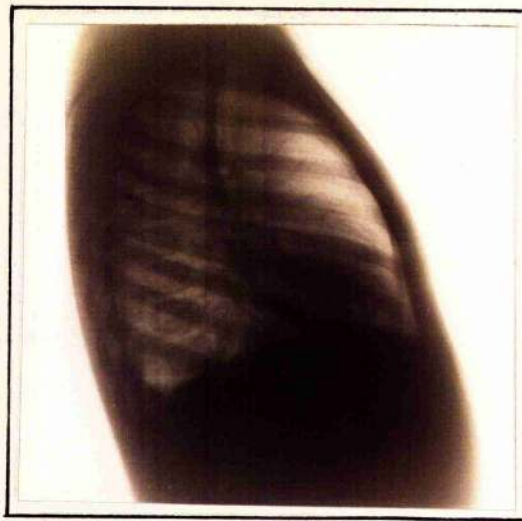
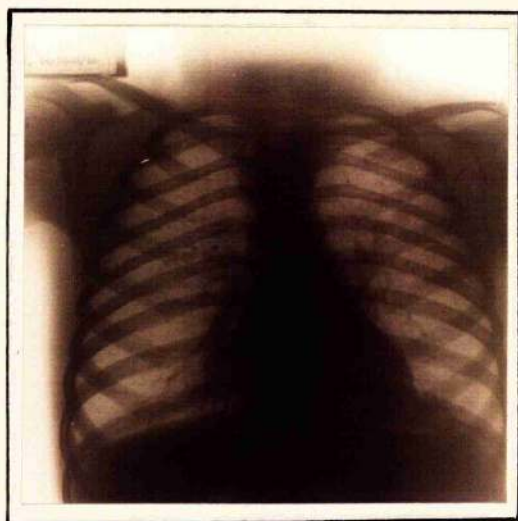


Plate 15. At First Examination.

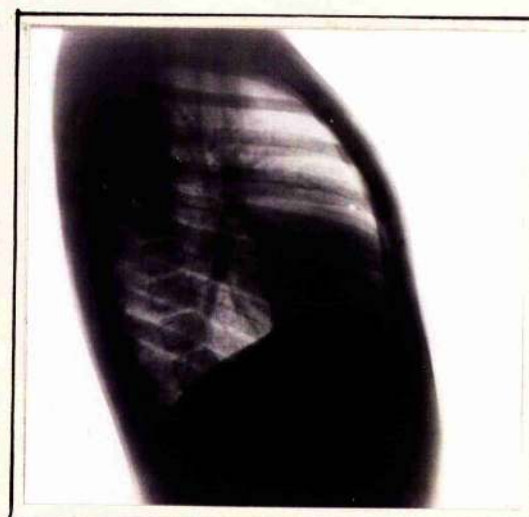
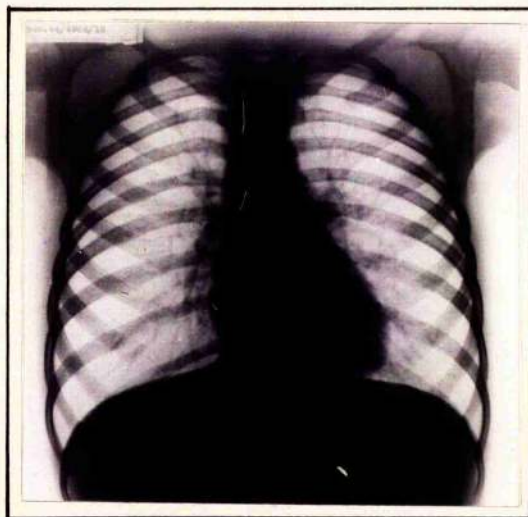


Plate 15 a. At Three Months.

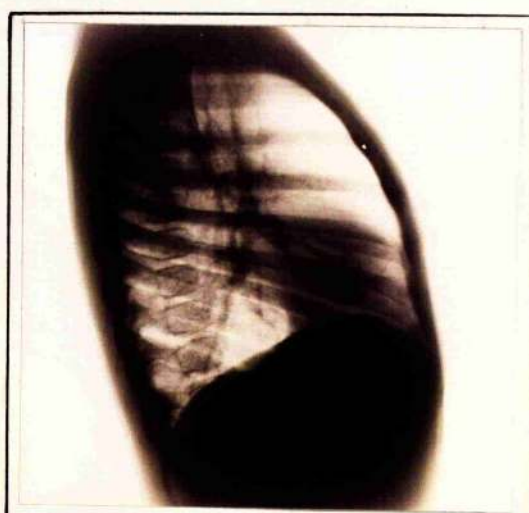


Plate 15 b. At Six Months.

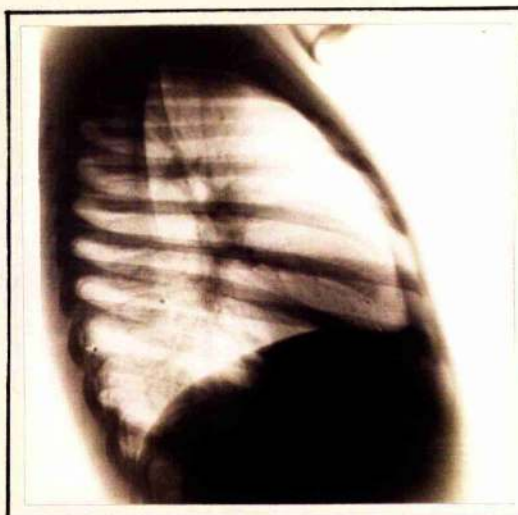
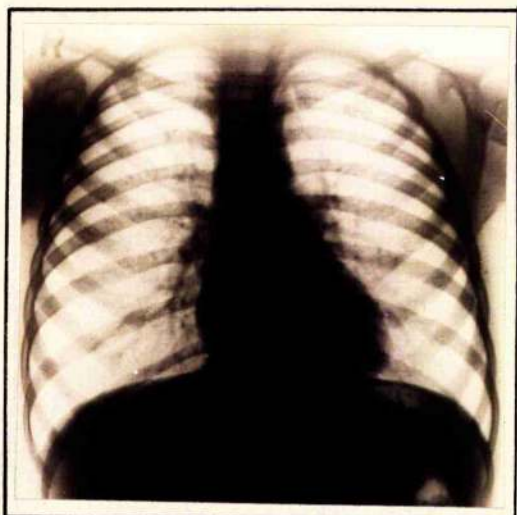


Plate 15 c. At One Year.

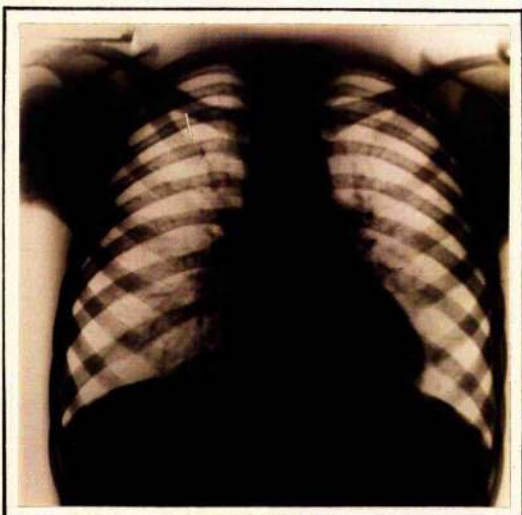


Plate 15 d. At Eighteen Months.

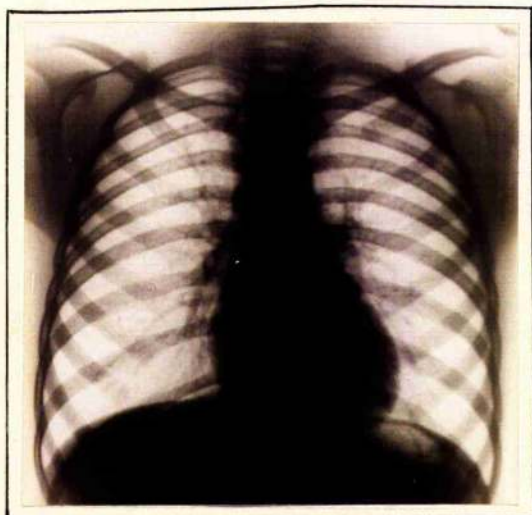


Plate 15 e. At Two Years.

Name. A.R. Sex. Female. Age. 2 years 8 months.

Date of Birth. 7/12/41.

Feeding. At breast for three months and thereafter fed on cow's milk (not boiled) as mother developed mastitis.

Family History. Parents are alive and well. One sister aged one year and seven months has whooping cough (case 17). Two brothers aged thirteen and five years are healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough July, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(2 years 8 months)

Height and Weight. 36.75 inches. 37 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Slight enlargement of tonsils and adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis* and diphtheroid types.

Haematology.

Erythrocytes 5,170,000 per c.mm.
Leucocytes 16,500 per c.mm.
Haemoglobin 90 per cent. Colour Index 0.88

Differential Leucocyte Count:-

Neutrophils 43.75 per cent. (7,218 per c.mm.)
Eosinophils 11.75 per cent. (1,938 per c.mm.)
Basophils 0.75 per cent. (123 per c.mm.)
Lymphocytes 37.75 per cent. (6,228 per c.mm.)
Monocytes 6.00 per cent. (990 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	30	33	34	2	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 21 inches. Antero-posterior diameter 5 inches. Lateral diameter 6.5 inches. Skin texture fine. Slight prominence of anterior superficial veins over upper part

of right side of chest. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 16. 'Broad symmetrical chest. Heart within normal limits.

Right lung: Diffuse root shadow and general increase of striation. No definite gland masses seen.

Left lung: Similar appearance.

Diaphragm flattened both right and left sides.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944)

(2 years 11 months)

Height and Weight. 37.75 inches (increase of 1 inch).
40 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 16 a. 'There is little change in the peribronchial congestion, but the root shadow generally shows some improvement and is less diffuse. The right upper bronchial glands are becoming smaller and more defined.'

At Six Months (February, 1945)

(3 years 2 months)

Height and Weight. 38.5 inches (increase of 0.75 inch).
41 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 16 b. 'As compared with November the right root shadow shows rather more congestion, and the glands in the right upper bronchial group are less well defined. The left root and glands appear unchanged.'

In June the child had measles.

At One Year (August, 1945)

(3 years 8 months)

Height and Weight. 40 inches (increase of 1.5 inches).
42 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 16 c. 'Little change either quantitatively or qualitatively in appearance of root shadow or in lung fields generally.'

At Eighteen Months (February, 1946)

(4 years 2 months)

Height and Weight. 41 inches (increase of 1 inch).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 16 d. 'Compared with six months ago there is a definite reduction in the extent of the root shadow with hardening of right and left upper bronchial glands.'

Lateral view shows hardening of all glands around the root of the lung and those along upper and lower lobe bronchi.'

In February the child had a cough for five weeks, especially after lying down in bed at night.

At Two Years (August, 1946)

(5 years 8 months)

Height and Weight. 42.75 inches (increase of 1.75 inches).
47 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 16 e. 'As compared with six months ago there is little change to be noted. As compared with two years ago the root shadows remain diffuse and gland masses on left side are still indefinite in outline. Gland masses on right side are, however, firmer in appearance. Slight peribronchial congestion remains.'

CYRTOMETER TRACINGS

(one quarter natural size)

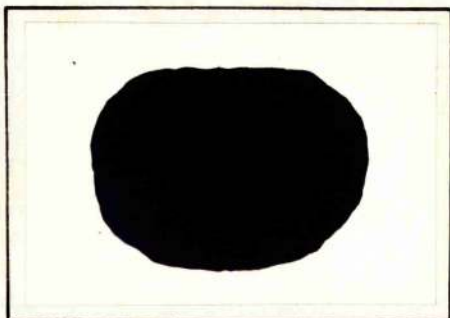


Fig. 16.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 6.50 inches.

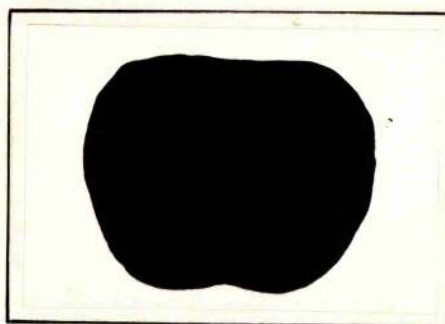


Fig. 16 a.

At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

21 inches.

23 inches.

(Female. 2 years 8 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Knickers	Wool	Knickers	Cotton
	Wool		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jersey	Wool	Frock	Cotton
Cardigan	Wool		
Frock	Wool		
Coat	Tweed		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

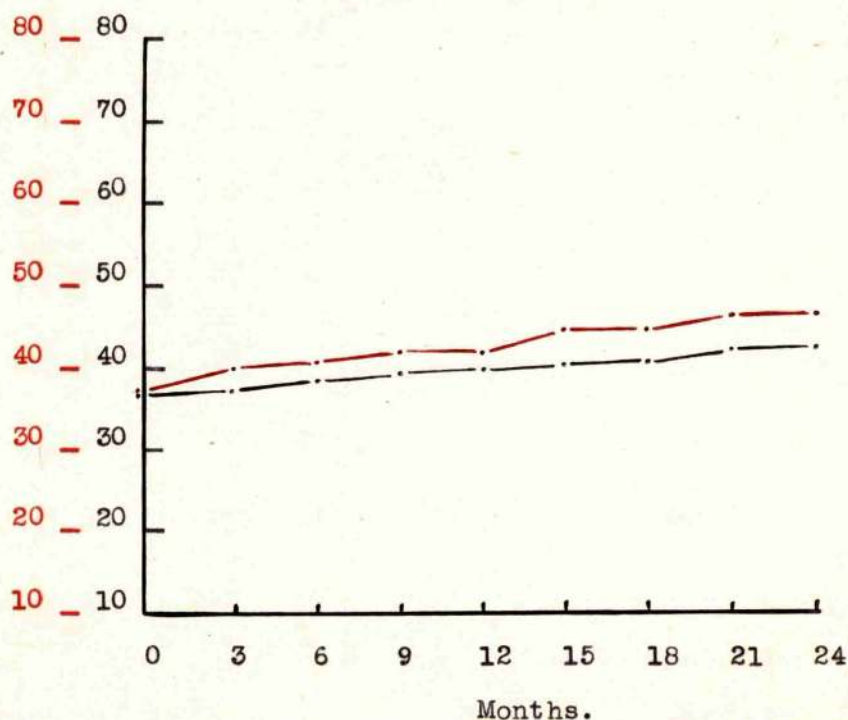
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



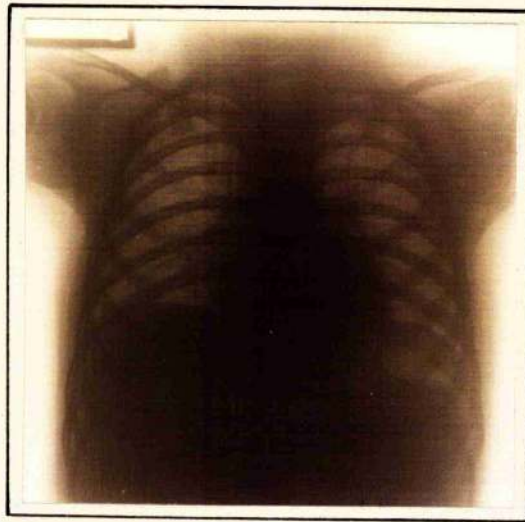


Plate 16. At First Examination.

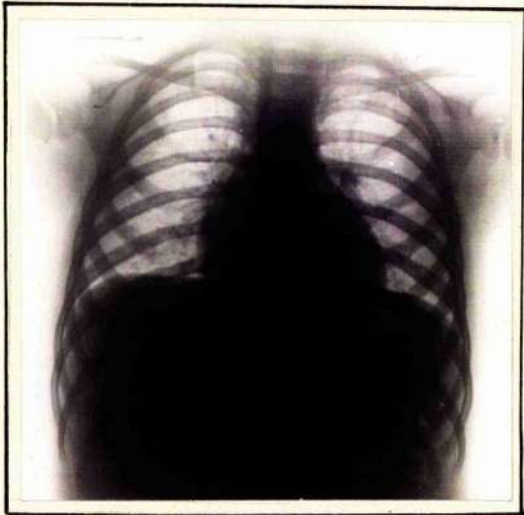


Plate 16 a. At Three Months.

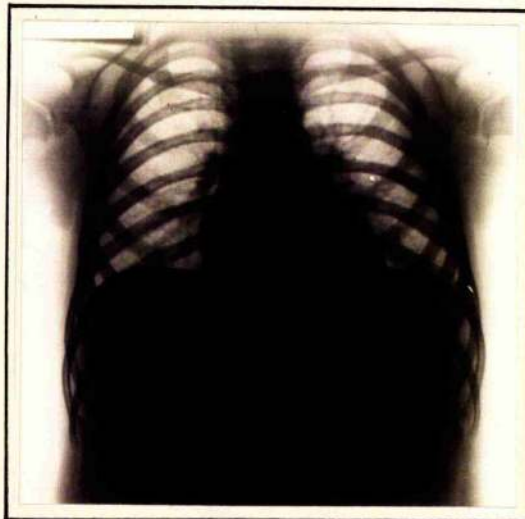


Plate 16 b. At Six Months.

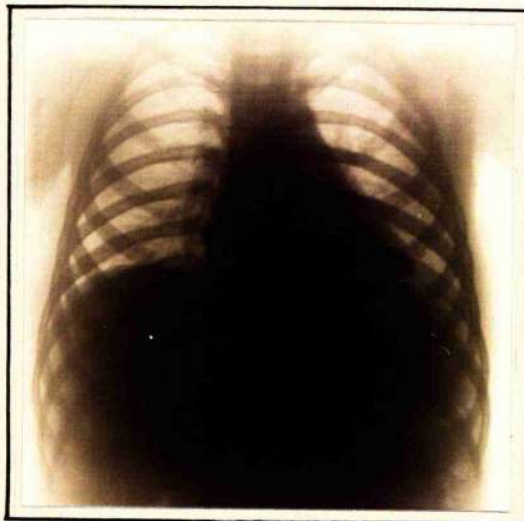


Plate 16 c. At One Year.

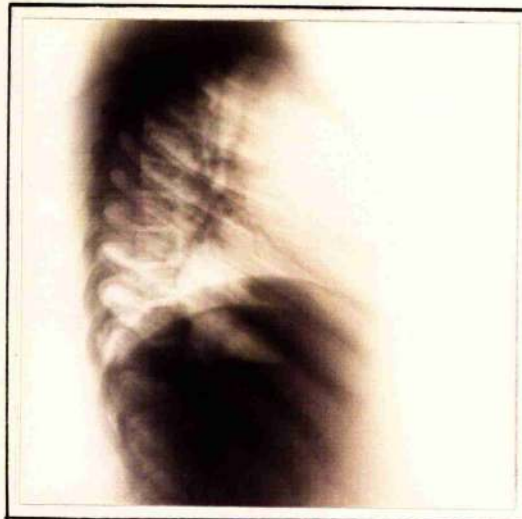
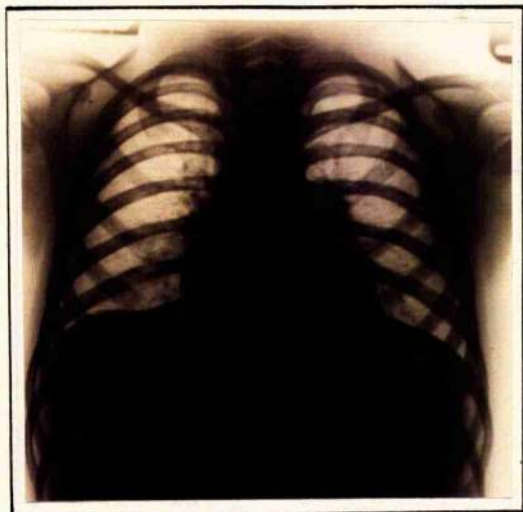


Plate 16 d. At Eighteen Months.

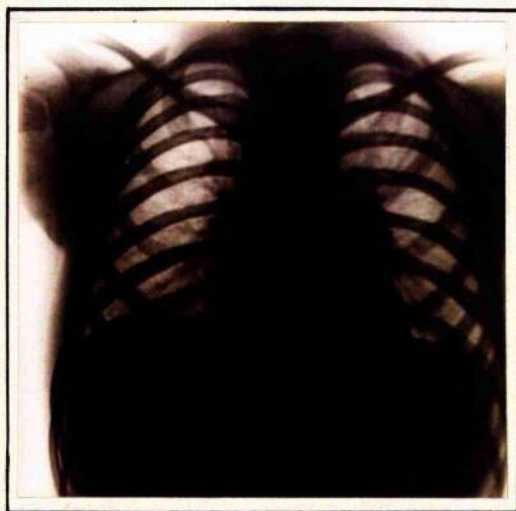


Plate 16 e. At Two Years.

Name. M.R. Sex. Female. Age. 1 year 7 months.

Date of Birth. 26/1/43.

Feeding. At breast for three weeks and thereafter fed on cow's milk (not boiled) as mother developed mastitis.

Family History. Parents are alive and well. One sister aged two years eight months has whooping cough (case 16). Two brothers aged thirteen and five years are healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough followed
by chickenpox July, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(1 year 7 months)

Height and Weight. 31.5 inches. 27 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 4321 1234
Teeth in lower jaw: 4321 1234
Total number of teeth: 16

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, diphtheroids and coliform bacilli.

Haematology.

Erythrocytes 5,720,000 per c.mm.
Leucocytes 14,733 per c.mm.
Haemoglobin 93 per cent. Colour Index 0.82

Differential Leucocyte Count:-

Neutrophils 34.25 per cent. (5,046 per c.mm.)
Eosinophils 1.00 per cent. (147 per c.mm.)
Basophils 0.75 per cent. (110 per c.mm.)
Lymphocytes 59.25 per cent. (8,728 per c.mm.)
Monocytes 4.75 per cent. (699 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	13	25	48	13	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 19 inches. Antero-posterior diameter 4.5 inches. Lateral diameter 6 inches. Skin texture fine.

Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular. Soft mitral systolic murmur at apex, not conducted into axilla.

Radiographic Findings

Plate 17. 'Blurred picture owing to movement of patient. Some root enlargement and increased striation into right basal and left apical zones.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944)

(1 year 10 months)

Height and Weight. 32.25 inches (increase of 0.75 inch). 28 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 17 a. 'No obvious change in radiological appearance. there remains root and peribronchial congestion.'

At Six Months (February, 1945)

(2 years 1 month)

Height and Weight. 33.5 inches (increase of 1.25 inches). 30 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 17 b. 'Compared with plate taken three months ago there is a reduction in the amount of peribronchial congestion throughout the lung fields. The root shadow shows no definite change.'

In June the child had measles.

At One Year (August, 1945)

(2 years 7 months)

Height and Weight. 35 inches (increase of 1.5 inches).
32 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 17 c. 'Little change in appearance of root shadow, save at left upper root, where there is an increase in the size of the glands along the upper lobe bronchus.'

At Eighteen Months (February, 1946)

(3 years 1 month)

Height and Weight. 36 inches (increase of 1 inch).
34 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 17 d. 'Generally root shadow remains unchanged, save for the glands along left upper lobe bronchi which are smaller and firmer. Lung field remains unchanged.

Right lateral view shows large but firm glandular shadow by right posterior basal bronchus. Right upper lobe bronchial glands are small but not yet hard.'

At Two Years (August, 1946)

(3 years 7 months)

Height and Weight. 37.50 inches (increase of 1.5 inches).
35 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 17 e. 'As compared with six months ago there is much less peribronchial congestion and gland masses remain well defined. Compared with two years ago root shadows remain

moderately diffuse, but with fair definition. The glands along the right and left upper lobe bronchi are firmer in appearance.'

CYRTOMETER TRACINGS

(one quarter natural size)

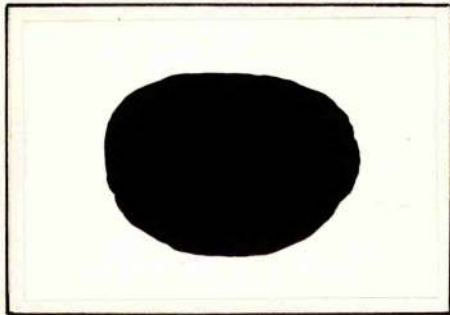


Fig. 17.

At First Examination

A-P. diameter 4.50 inches.
L. diameter 6.00 inches.

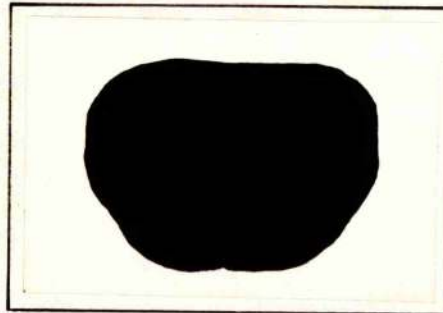


Fig. 17 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

19 inches.

20 inches.

(Female. 1 year 7 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Vest	Wool	Knickers	Cotton
Knickers	Wool		
Shoes and socks.		Shoes and socks.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jersey	Wool	Frock	Cotton
Frock	Wool		
Coat	Tweed		
Scarf	Wool		
Pantaloon	Wool		
Hat.		No hat.	

Overclothed:

No.

Constriction of chest due to clothing:

None.

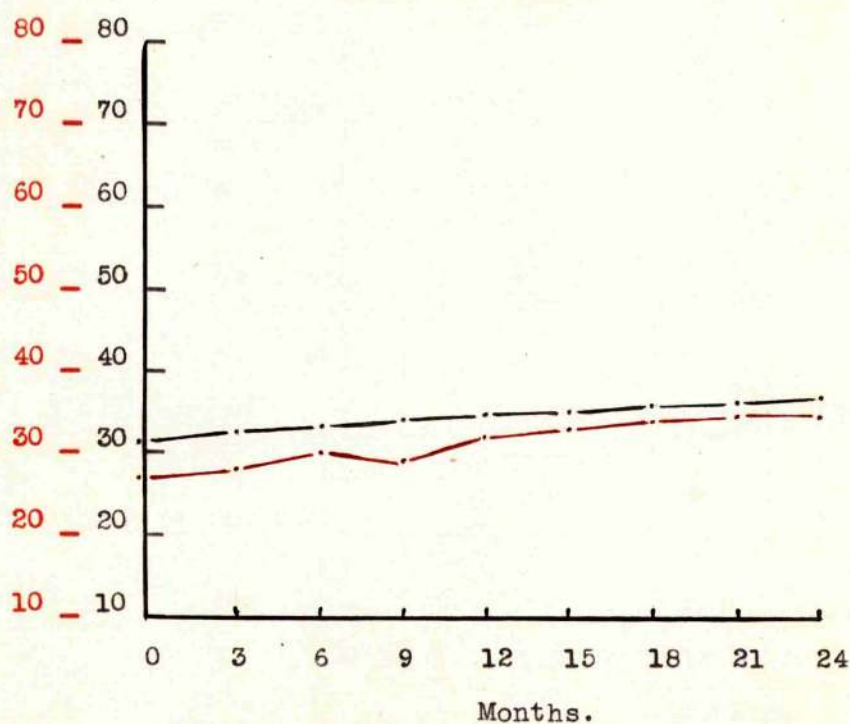
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



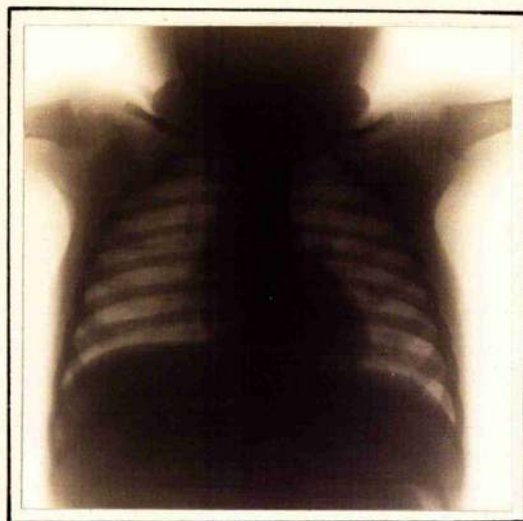


Plate 17. At First Examination.

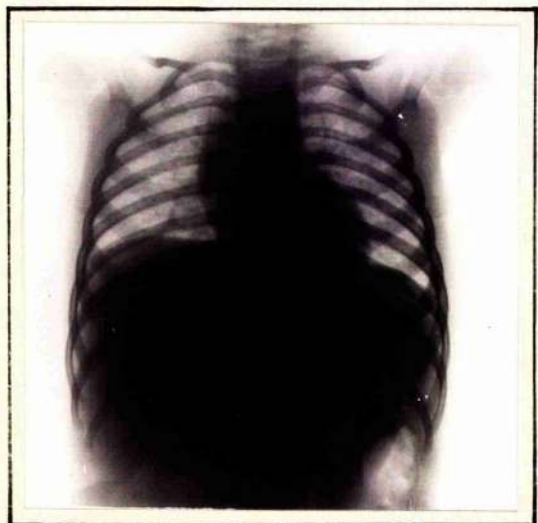


Plate 17 a. At Three Months.

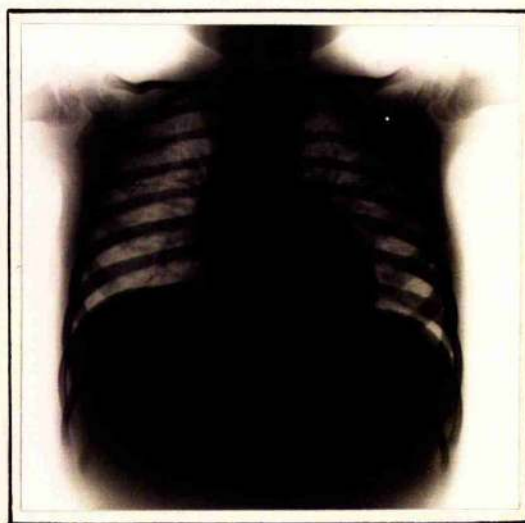


Plate 17 b. At Six Months.

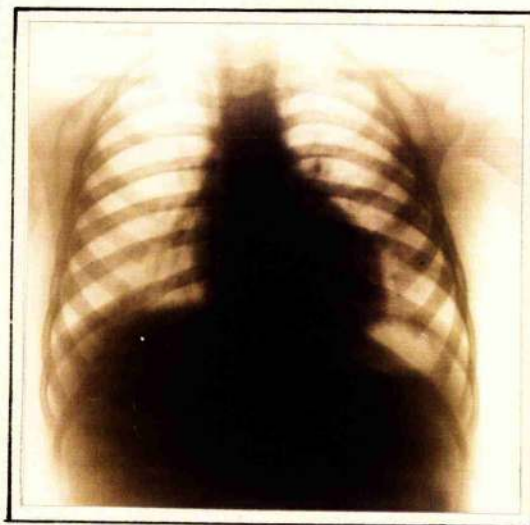


Plate 17 c. At One Year.

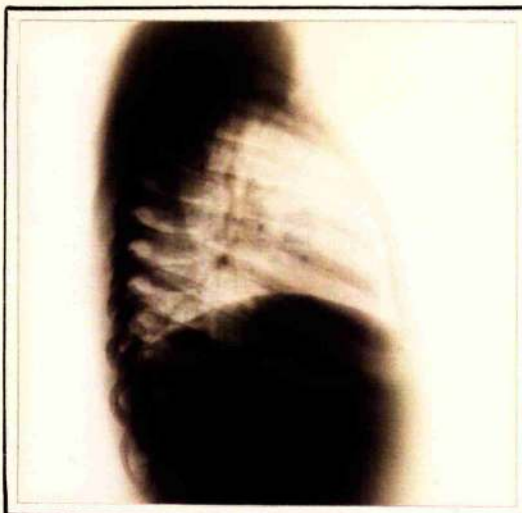
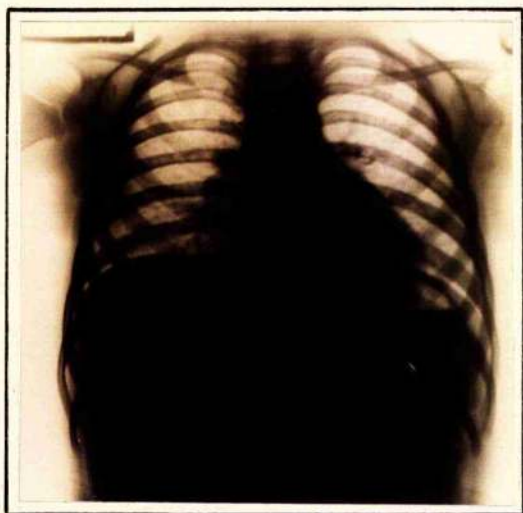


Plate 17 d. At Eighteen Months.

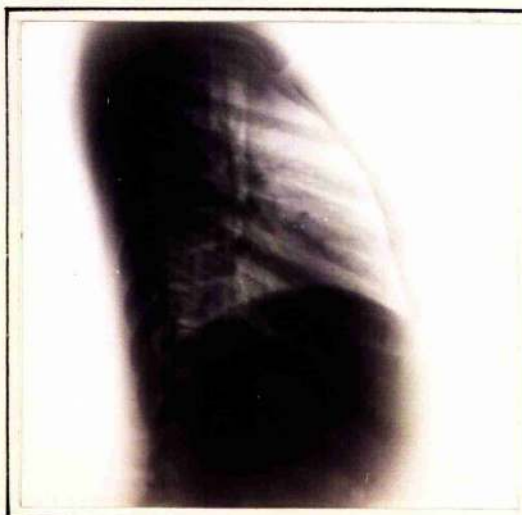
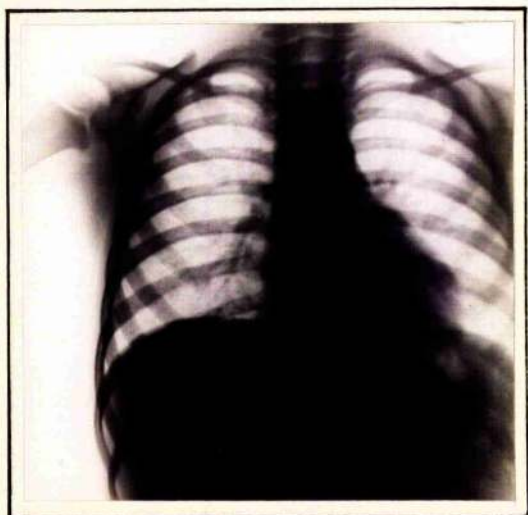


Plate 17 e. At Two Years.

Name. R. McG. Sex. Female. Age. 3 years.

Date of Birth. 27/8/41

Feeding. At breast for three weeks and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. Two sisters aged five and four years are healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough July, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944

(3 years)

Height and Weight. 37.75 inches. 30 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: -4321 12345
Total number of teeth: 19

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, pneumococci and staphylococci.

Haematology.

Erythrocytes 5,150,000 per c.mm.
Leucocytes 13,586 per c.mm.
Haemoglobin 87 per cent. Colour Index 0.85

Differential Leucocyte Count:-

Neutrophils 34.75 per cent. (4,721 per c.mm.)
Eosinophils 2.75 per cent. (373 per c.mm.)
Basophils 0.25 per cent. (33 per c.mm.)
Lymphocytes 57.50 per cent. (7,811 per c.mm.)
Monocytes 4.75 per cent. (645 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	25	39	30	6	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 19.5 inches. Antero-posterior diameter 5.25 inches. Lateral diameter 6.75 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited.

through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 18. 'Chest regular in shape. Heart normal.

Right lung: Root shadow is diffuse with a few glands showing along lower bronchial tree. There is a generalised increase of lung striation.

Left lung: Small glands in centre of diffusely enlarged root shadow. Striation generally increased.

Lateral view shows numerous small glands in all areas. Striation generally increased.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944)

(3 years 3 months)

Height and Weight. 38 inches (increase of 0.25 inch).
31.5 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Radiographic Findings

Plate 18 a. 'Little change in appearance; if anything there is a slight increase in root and peribronchial congestion. Lateral view still shows diffuse root congestion.'

During December and January the child had a cough, especially after lying down in bed at night.

At Six Months (February, 1945)

(3 years 6 months)

Height and Weight. 39 inches (increase of 1 inch).
33 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 18 b. 'Continued reduction in size and improvement in

quality of root shadows generally. Less peribronchial congestion in lung fields.'

In April the child had her tonsils and adenoids removed and in June she had measles.

At One Year (August, 1945)

(4 years)

Height and Weight. 40.5 inches (increase of 1.5 inches).
34 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 18 c. 'Compared with February, 1945, there is little alteration in the appearance of the root shadows. There is, moreover, an increase in the lung striation into the right basal zone. On the left side, two upper bronchial glands show slight enlargement.

Lateral view confirms increased peribronchial congestion into right base posteriorly.

In December the child had a bronchial catarrh for two weeks.

At Eighteen Months (February, 1946)

(4 years 6 months)

Height and Weight. 41.5 inches (increase of 1 inch).
38 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 18 d. 'Continued hardening of glands of right and left upper bronchial group.

Lateral view confirms general hardening of glands.'

At Two Years (August, 1946)

(5 years)

Height and Weight. 43 inches (increase of 1.5 inches).
38 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 18 e. 'As compared with six months ago the present film shows little change in the appearance of the root shadows either in the antero-posterior or lateral views.

As compared with two years ago the present film shows a root shadow still diffuse, but not quite so soft and congested as before. The glands along right and left upper lobe bronchi are smaller and firmer. The lung markings into right basal zone are less prominent.

Lateral view shows marked improvement in amount of peri-bronchial congestion generally and the glands generally are smaller and firmer.'

CYRTOMETER TRACINGS

(one quarter natural size)

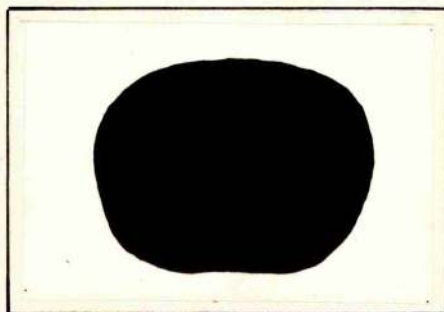


Fig. 18.

At First Examination

A-P. diameter 5.25 inches.
L. diameter 6.75 inches.

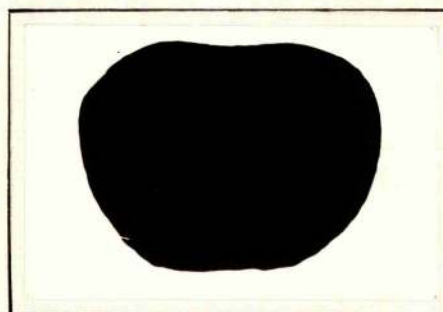


Fig. 18 a.

At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

19.5 inches.

21.5 inches.

(Female. 3 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Knickers	Flannel	Knickers	Cotton
Petticoat	Cotton	Petticoat	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Frock	Wool	Frock	Cotton
Coat	Tweed		
Scarf	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

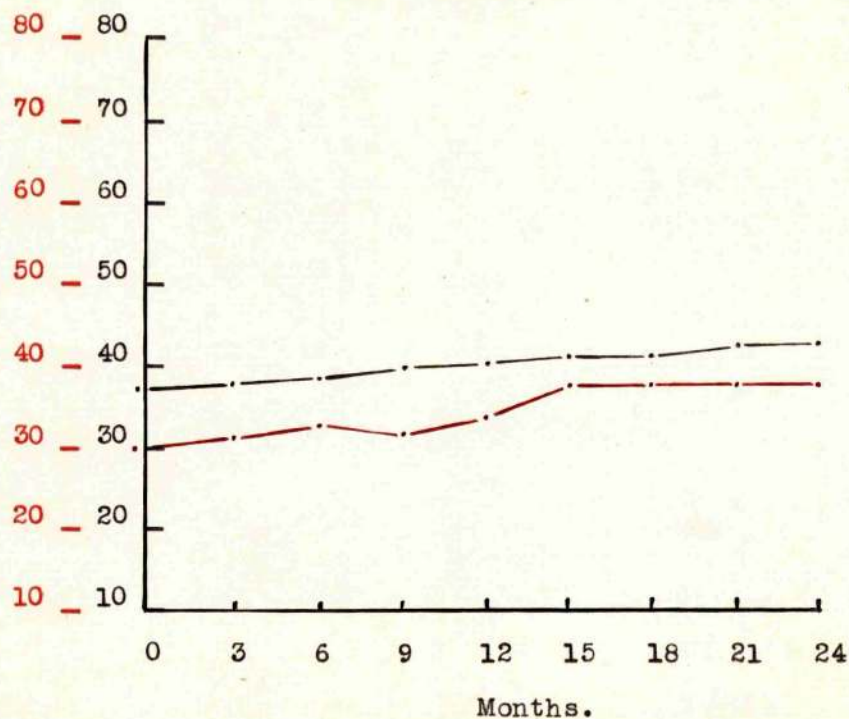
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



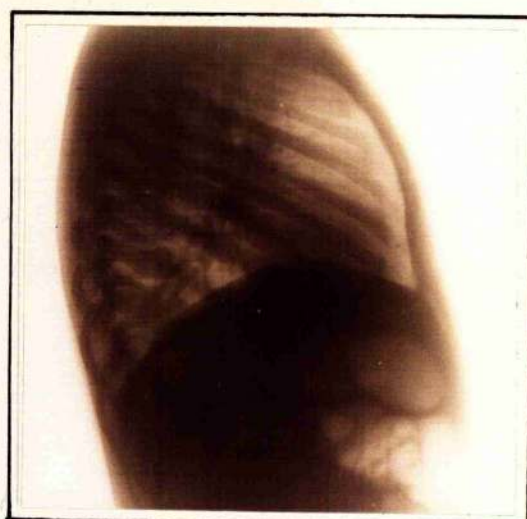
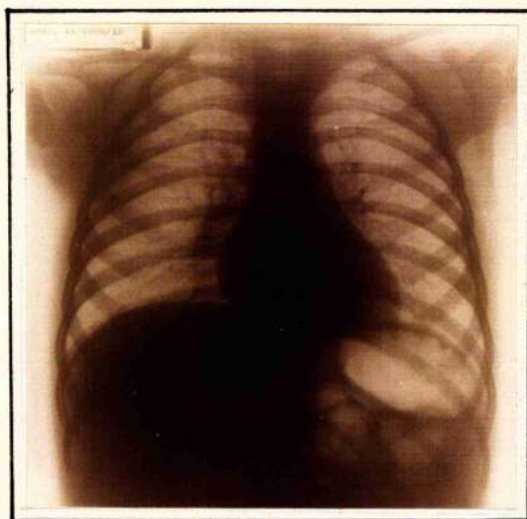


Plate 18. At First Examination.

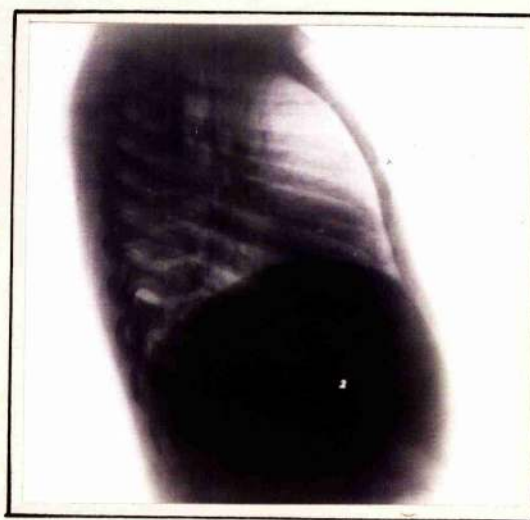
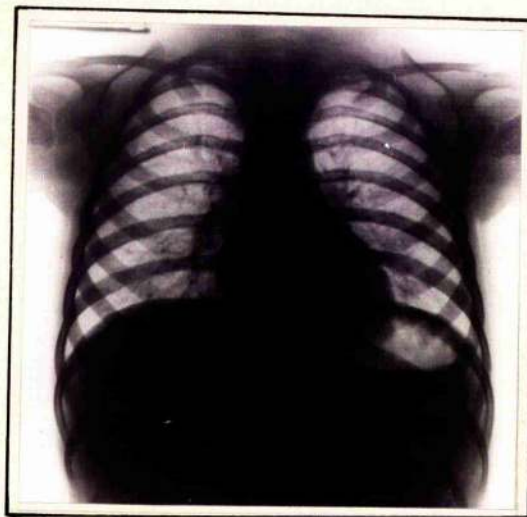


Plate 18 a. At Three Months.

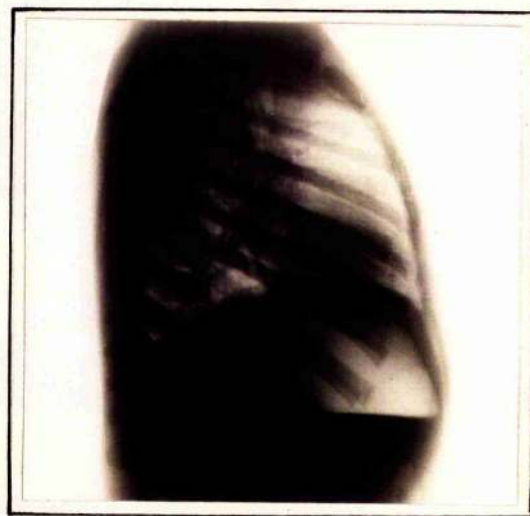
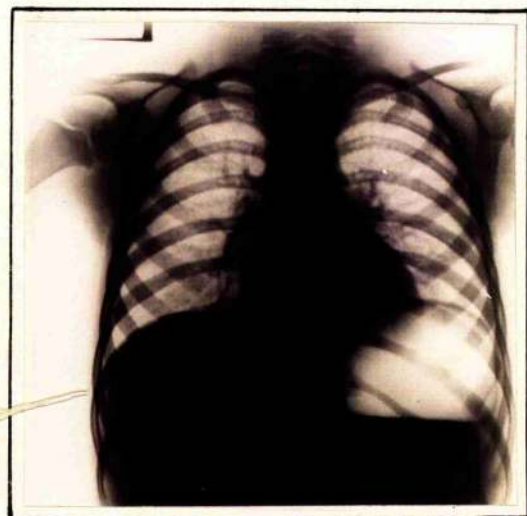


Plate 18 b. At Six Months.

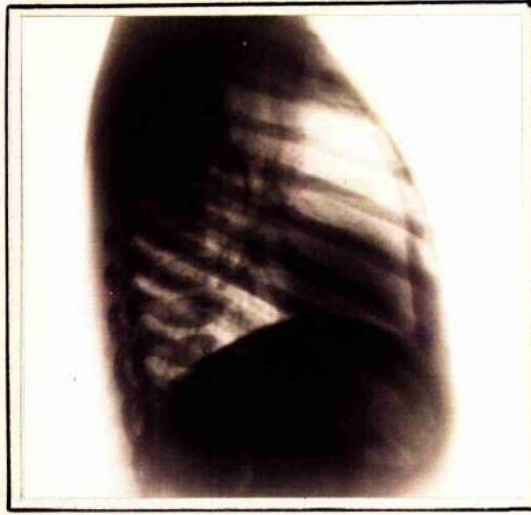
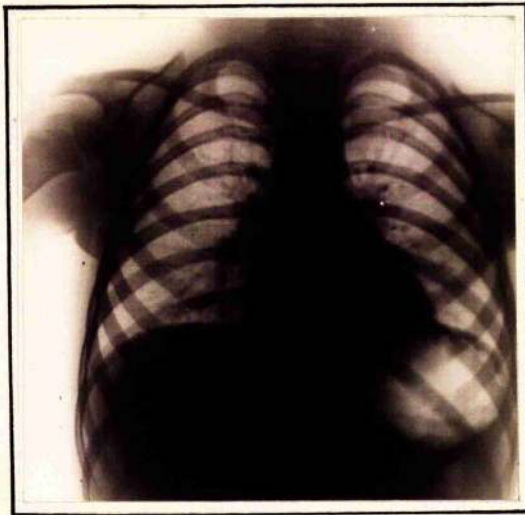


Plate 18 c. At One Year.

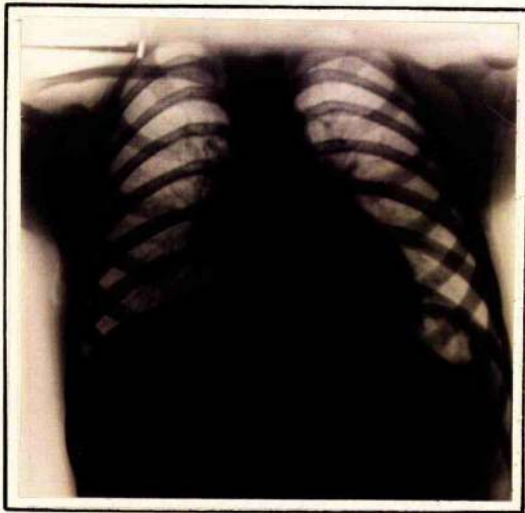


Plate 18 d. At Eighteen Months.

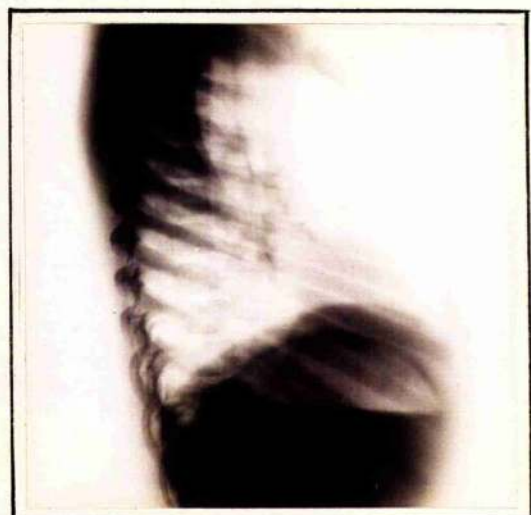
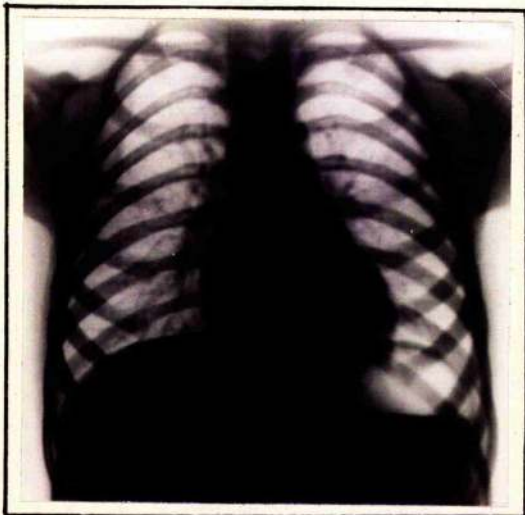


Plate 18 e. At Two Years.

Name. J.S. Sex. Male. Age. 3 years.

Date of Birth. 25/8/41.

Feeding. At breast for three months and thereafter fed on Ostermilk when lactation stopped.

Family History. Parents are alive and well. One sister aged six years is healthy. No family history of tuberculosis.

Previous Illnesses

Measles September, 1942.
Whooping cough July, 1944.

Environment and Parental Care. The family resides in a two room and kitchen house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(3 years)

Height and Weight. 35.5 inches. 26 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 543-- 12345
Teeth in lower Jaw; 54321 12345
Total number of teeth: 18

Ear, Nose and Throat. Ears healthy. No nasal discharge. No enlargement of tonsils or adenoids.

Naso-faecial Flora. Mainly *M. catarrhalis*, diphtheroids, pneumococci, streptococci and staphylococci (aureus).

Haematology

Erythrocytes 4,500,000 per c.mm.
Leucocytes 8,533 per c.mm.
Haemoglobin 85 per cent. Colour Index 0.94

Differential Leucocyte Count:-

Neutrophils 22.25 per cent. (1,898 per c.mm.)
Eosinophils 7.00 per cent. (597 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 69.50 per cent. (5,930 per c.mm.)
Monocytes 1.25 per cent. (106 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	9	46	37	6	2

Physical Examination of Chest. Muscular development moderate. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 19.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine except over palms of hands and soles of feet where it is thick due to Tylosis. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of

patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular. Soft mitral systolic murmur at apex not conducted into axilla.

Radiographic Findings

Plate 19. 'Chest well made and symmetrical. Heart within normal limits.

Right lung: The root shadow is diffusely enlarged with no definite localising shadows. The lungs show a slight increase of striation.

Left lung: The root shadows show enlargement in the upper pole with the glands along the upper lobe bronchi enlarged and striation increased into upper lobe.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944)

(3 years 3 months)

Height and Weight. 36 inches (increase of 0.5 inch). 26.5 pounds (gain of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Radiographic Findings

Plate 19 a. 'Films show no appreciable alteration as compared with that of August.'

At Six Months (February, 1945)

(3 years 6 months)

Height and Weight. 37 inches (increase of 1 inch). 28 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 19 b. 'Root shadow beginning to become less diffuse, more defined and the gland groups along upper lobe bronchi, right and left, are also smaller and more defined.'

At One Year (August, 1945)

(4 years)

Height and Weight. 38 inches (increase of 1 inch).
29 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

For the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 19 c. 'The root congestion is increased from February, but the left upper bronchial glands show up much firmer and one is showing signs of calcification. Generalised peribronchial congestion remains.

Lateral view shows generalised root and peribronchial congestion.'

In December the child had a cough for ten days, especially after lying down in bed at night.

At Eighteen Months (February, 1946)

(4 years 6 months)

Height and Weight. 38.75 inches (increase of 0.75 inch).
30 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 19 d. 'As compared with six months ago the present films show definite improvement. The root shadows are less extensive, less congested and the glands along right and left upper lobe bronchi are still smaller and more defined.'

At Two Years (August, 1946)

(5 years)

Height and Weight. 40.5 inches (increase of 1.75 inches).
31 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and

tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 19 e. 'Compared with six months ago there is improvement noted in extent and quality of root shadow. Lateral view shows no apparent change.

As compared with two years ago the root shadows are much less diffuse and firmer in texture. The glands along right and left upper bronchi are small, firm and apparently calcified. Lung striation is within normal limits.'

CYRTOMETER TRACINGS

(one quarter natural size)

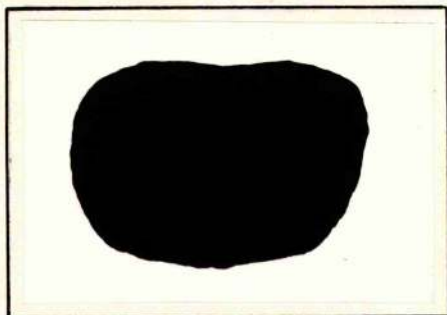


Fig. 19.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

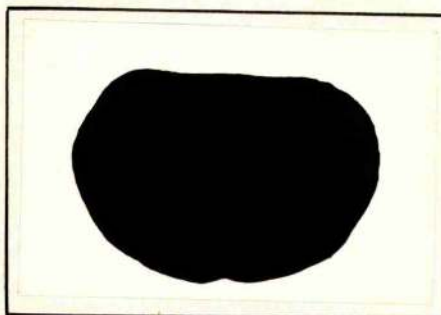


Fig. 19 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.25 inches.

Circumference of Chest During Quiet Respiration

19.5 inches.

20.5 inches.

(Male. 3 years.)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Pants	Wool		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Trousers	Tweed	Trousers	Flannel
Pullover	Wool		
Coat	Wool		
Scarf	Wool		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

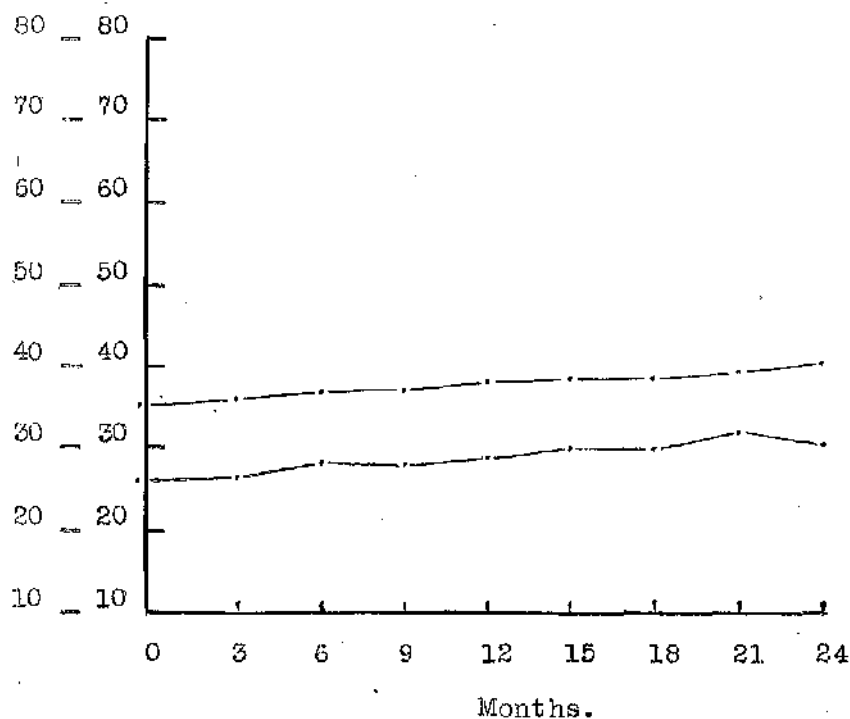
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



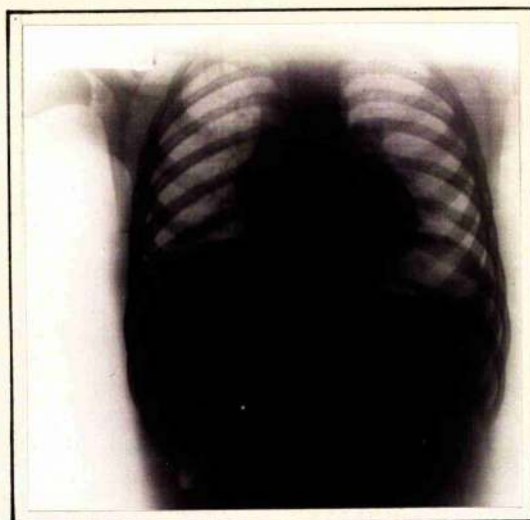


Plate 19. At First Examination.

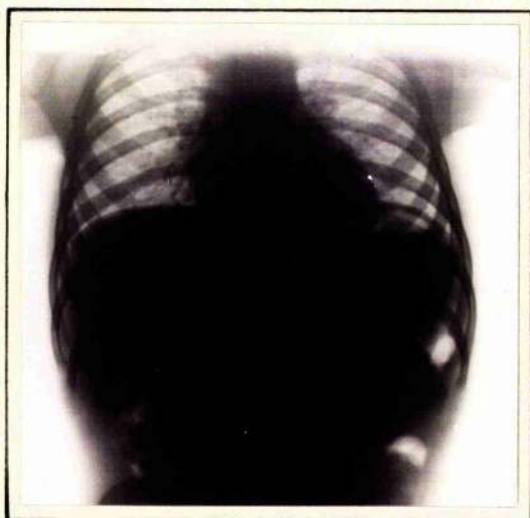


Plate 19 a. At Three Months.

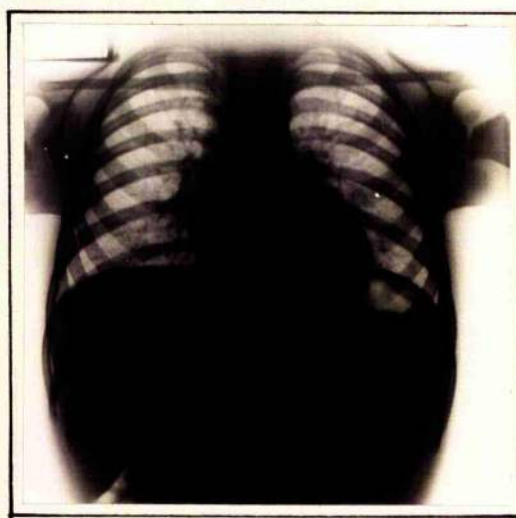


Plate 19 b. At Six Months.

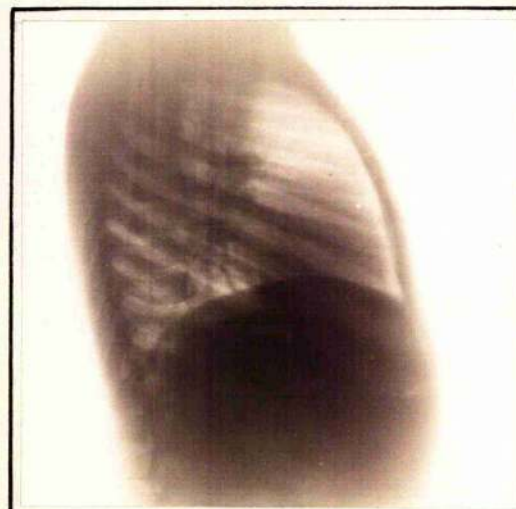
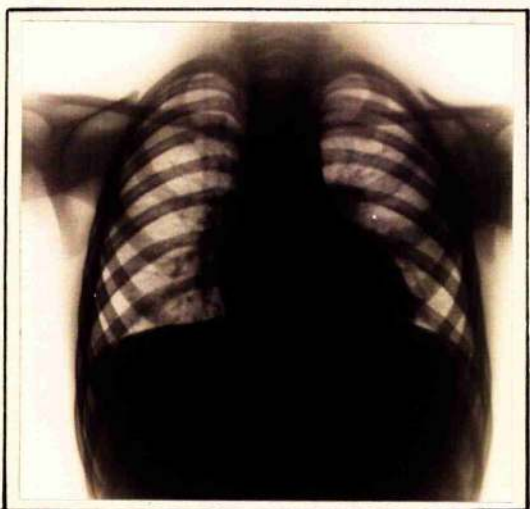


Plate 19 c. At One Year.

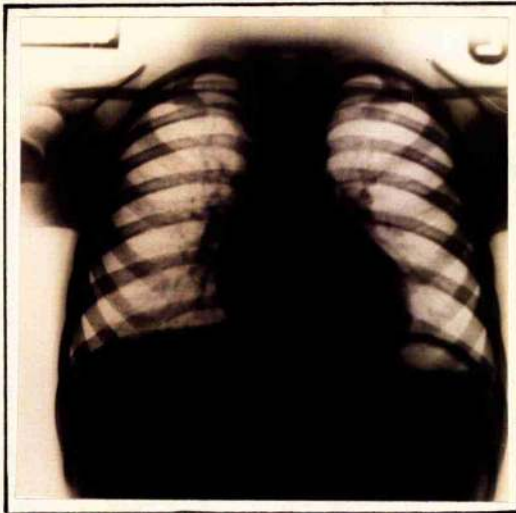


Plate 19 d. At Eighteen Months.

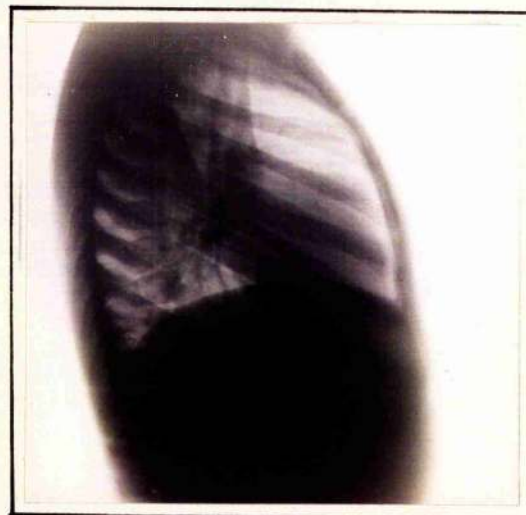
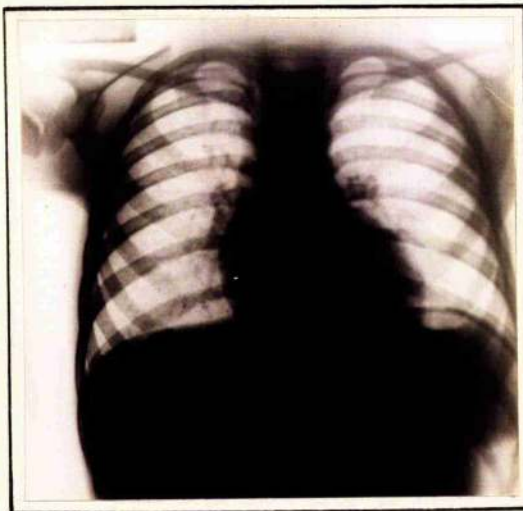


Plate 19 e. At Two Years.

Name. E.H. Sex. Male. Age. 3 years 6 months.

Date of Birth. 2/2/41.

Feeding. At breast for one month and thereafter fed on Oster-milk as mother developed mastitis.

Family History. Parents are alive and well. One brother aged nine years is healthy. No family history of tuberculosis.

Previous Illnesses

Measles	October, 1941.
Scarlet fever	November, 1941.
Whooping cough	July, 1944.

Environment and Parental Care. The family resides in a sub-let one apartment tenement house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(3 years 6 months)

Height and Weight. 35.75 inches. 28 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Slight enlargement of tonsils and adenoids.

Naso-faucial Flora. Mainly M. catarrhalis, diphtheroids, staphylococci and streptococci.

Haematology.

Erythrocytes	5,200,000 per c.mm.
Leucocytes	11,711 per c.mm.
Haemoglobin 76 per cent.	Colour Index 0.71

Differential Leucocyte Count:-

Neutrophils	44.50 per cent.	(5,211 per c.mm.)
Eosinophils	9.50 per cent.	(1,112 per c.mm.)
Basophils	0.50 per cent.	(58 per c.mm.)
Lymphocytes	42.25 per cent.	(4,947 per c.mm.)
Monocytes	3.25 per cent.	(380 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	12	17	54	15	2

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 4.75 inches. Lateral diameter 6.50 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not

elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 20. 'Regular chest wall. Heart normal in size.

Right lung: General enlargement of root shadow, soft in appearance with small glands present at bronchial root and along lower lobe bronchi. The lung striation is generally increased.

Left lung: Glands and increased striation along upper lobe bronchi. Larger gland masses seen lower down through heart shadow. General increase of striation.

Lateral view shows glands visible along lower lobe bronchi, axillary and posterior.'

SUBSEQUENT EXAMINATIONS

At Three Months (November, 1944.)

(3 years 9 months)

Height and Weight. 36.5 inches (increase of 0.75 inch).
30 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially in the morning and after running.

Radiographic Findings

Plate 20 a. 'The root congestion appears still more diffuse and the striation, especially on the right side and to the right base, increased. The prominent gland by left upper lobe bronchus is more defined in outline.'

At Six Months (February, 1945)

(4 years)

Height and Weight. 36.75 inches (increase of 0.25 inch).
30.5 pounds (gain of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 20 b. 'Slight increase in amount of peribronchial congestion, especially in the lower lobes of both lungs. The glands show little change.'

At One Year (August, 1945)

(4 years 6 months)

Height and Weight. 38.25 inches (increase of 1.5 inches).
31 pounds (gain of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 20 c. 'There is an increase in the extent of the root shadows and particularly on the right side an added softening. The lung striation right and left remains unaltered.

Lateral view shows little change in appearance of root shadows.'

In December the child had bronchial catarrh for ten days.

At Eighteen Months (February, 1946)

(5 years)

Height and Weight. 38.75 inches (increase of 0.5 inch).
32 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. A few scattered rhonchi over right side of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. Occasional cough for past few days.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 20 d. 'As compared with films of six months ago the present films show a slight but definite improvement. The root shadows are as extensive as before, but show a hardening of outline, denoting less congestion. The glands too, are hardening generally and the lung fields are clearer.'

In June the child had a cough for two weeks, especially after lying down in bed at night.

At Two Years (August, 1946)

(5 years 6 months)

Height and Weight. 40 inches (increase of 1.25 inches).
34 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 20 e. 'As compared with six months ago the root congestion has diminished and right basal striation is less marked. Lateral view shows clearing of right posterior basal congestion.

As compared with two years ago the root shadows remain diffuse, but are firmer in appearance. Calcification of glands along right and left upper lobe bronchi. Lateral view shows calcification of upper bronchial glands.'

CYRTOMETER TRACINGS

(one quarter natural size)

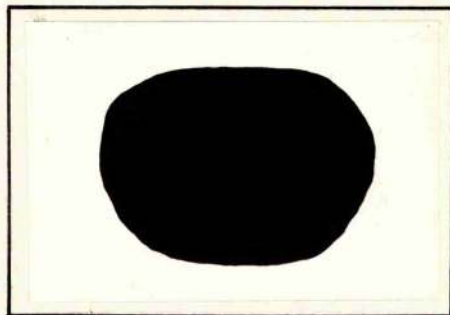


Fig. 20

At First Examination

A-P. diameter 4.75 inches.
L. diameter 6.50 inches.

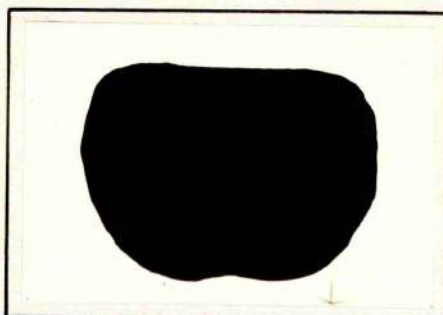


Fig. 20 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

20.0 inches.

21.5 inches.

(Male. 3 years 7 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Vest	Cotton		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Flannel	Shirt	Cotton
Trousers	Flannel	Trousers	Flannel
Pullover	Wool		
Coat	Tweed		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

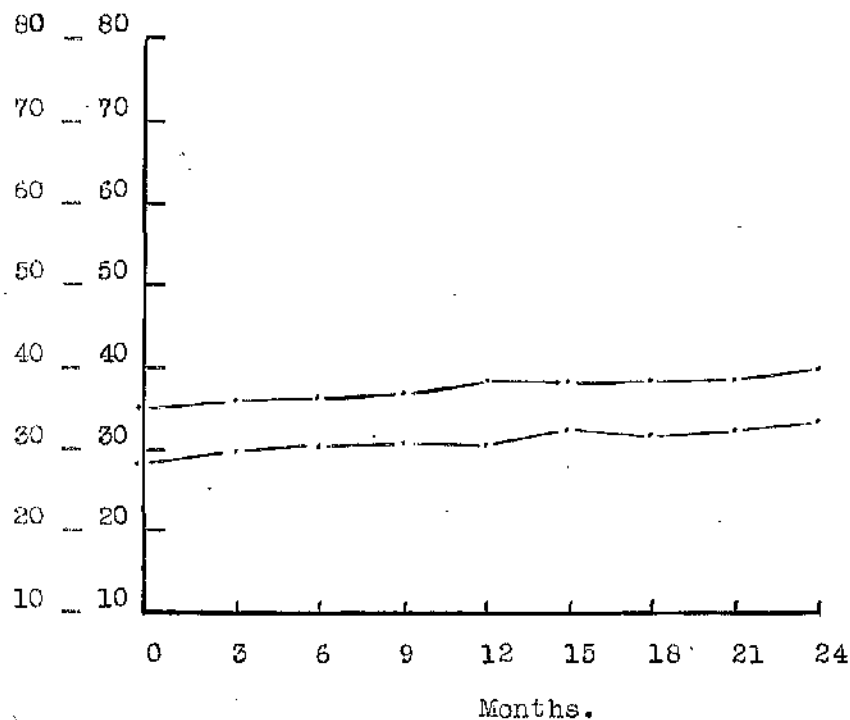
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



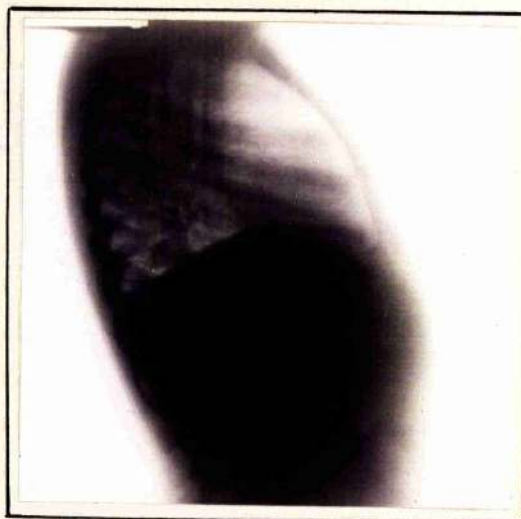
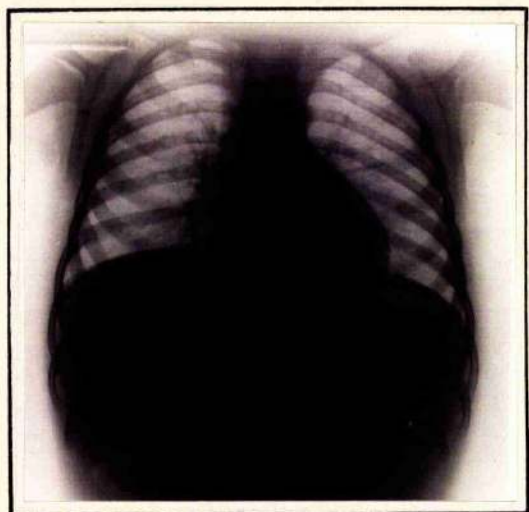


Plate 20. At First Examination.

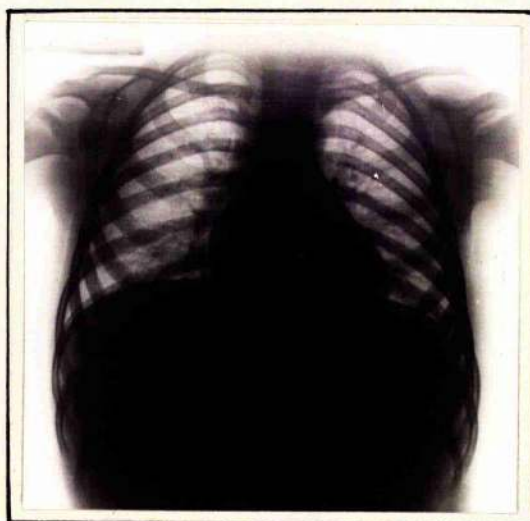


Plate 20 a. At Three Months.

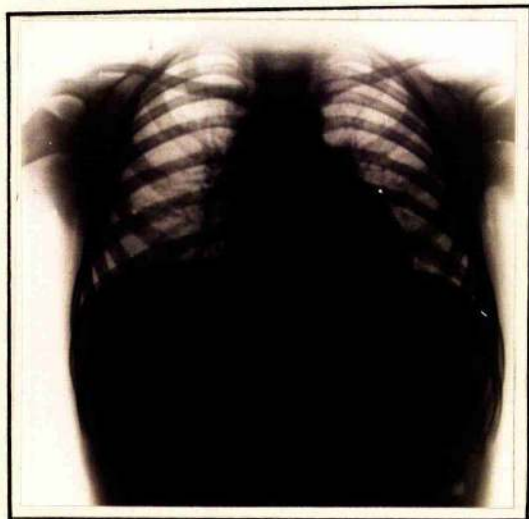


Plate 20 b. At Six Months.

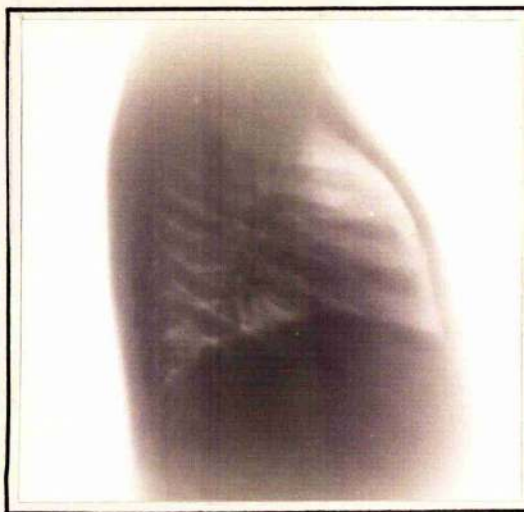
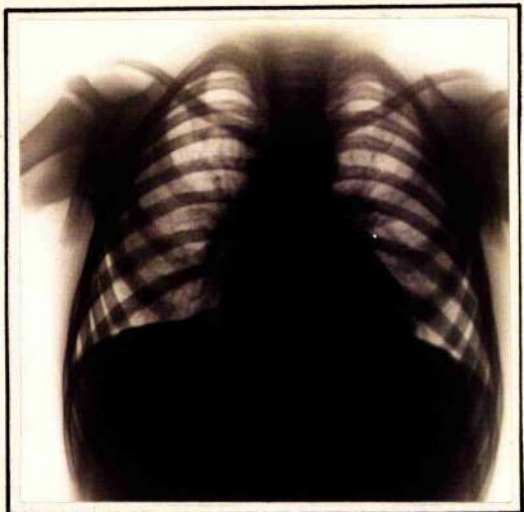


Plate 20 c. At One Year.

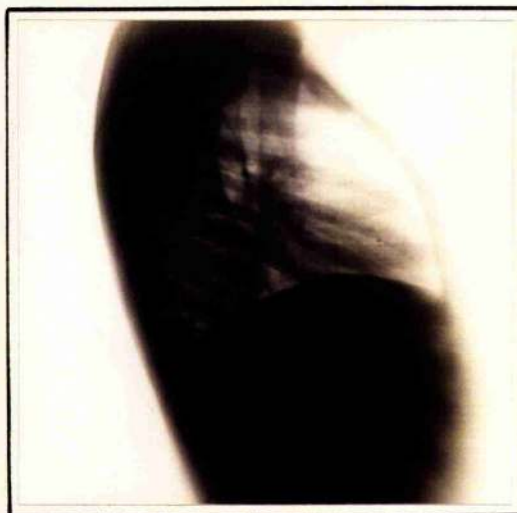
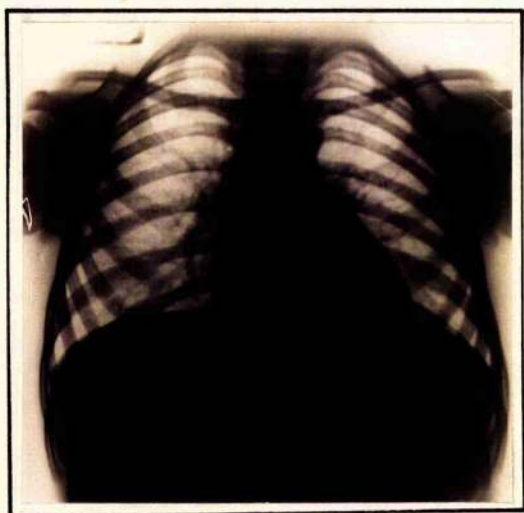


Plate 20 d. At Eighteen Months.

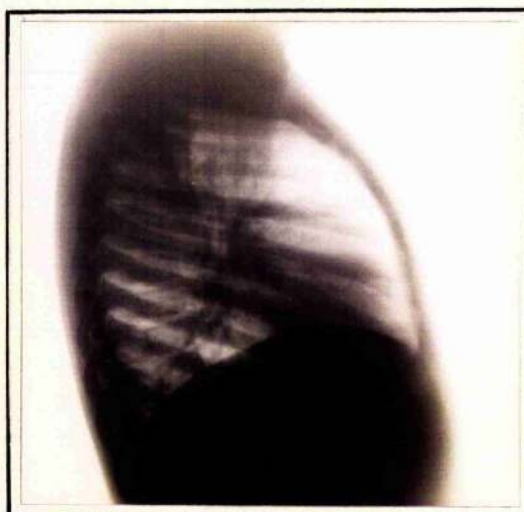
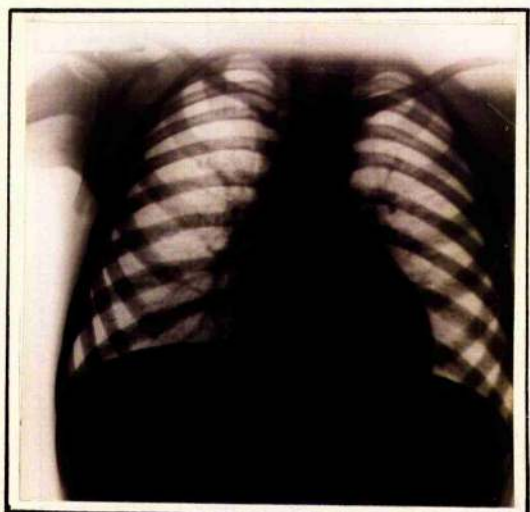


Plate 20 e. At Two Years.

Name. J. McC. Sex. Female. Age. 5 years 11 months.

Date of Birth. 6/9/38.

Feeding. At breast for eleven months.

Family History. Parents are alive and well. One brother aged two years two months has whooping cough (case 22). No family history of tuberculosis.

Previous Illnesses

Tonsillitis	December, 1940.
Measles	March, 1941.
Mumps	November, 1943.
Chickenpox	February, 1944.
Whooping cough	July, 1944.

Environment and Parental Care. The family resides in a two room and kitchen house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(5 years 11 months)

Height and Weight. 44 inches. 37 pounds.

Mouth and Teeth. Tongue moist and clean. Three decayed teeth in lower jaw (5, 4, and 5). Remainder in good condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, pneumococci and streptococci including haemolytic strains.

Haematology.

Erythrocytes	5,650,000 per c.mm.
Leucocytes	13,864 per c.mm.
Haemoglobin	80 per cent. Colour Index 0.71

Differential Leucocyte Count:-

Neutrophils	44.25 per cent. (6,135 per c.mm.)
Eosinophils	2.00 per cent. (277 per c.mm.)
Basophils	0.50 per cent. (69 per c.mm.)
Lymphocytes	48.00 per cent. (6,664 per c.mm.)
Monocytes	5.25 per cent. (726 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	11	33	46	8	2

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture coarse. Slight enlargement of anterior superficial veins over upper part of right side of chest. No enlarged glands. Per-

ussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 21. 'Chest regular and symmetrical. Heart normal.

Right lung: Right root shadow increased mostly in upper half with enlargement of bronchial glands. Increase of striation towards apex and also into basal zone.

Left lung: Root enlargement in upper half with similar enlargement of bronchial glands. General increase of striation. One small gland visible along lobe bronchi.

Lateral view shows generalised increase of root shadow. Glands mostly enlarged in upper half.'

SUBSEQUENT EXAMINATIONS

In October the child had tonsillitis

At Three Months (November, 1944)

(6 years 2 months)

Height and Weight. 44.5 inches (increase of 0.5 inch). 37.5 pounds (gain of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 21 a. 'Generally the appearance is of slight yet definite improvement.

The right root shadow still shows evidence of congestion, but is certainly more defined in outline than in last film.

The periaadenitis around the left upper lobe bronchus has subsided with glandular masses appearing out of the previous diffuse shadow.

Lateral view shows glands throughout showing defined outline. Striation generally increased.'

In January the child had a cough for a week, especially after lying down in bed at night.

At Six Months (February, 1945)

(6 years 5 months)

Height and Weight. 45 inches (increase of 0.5 inch) 40.5 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was de-

tested. A few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 21 b. 'Both antero-posterior and lateral films show little improvement as compared with original films of August, 1944.'

At One Year (August, 1945)

(6 years 11 months)

Height and Weight. 46 inches (increase of 1 inch).
42 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 21 c. 'Compared with films of August, 1944 and February, 1945, the present antero-posterior film shows a slight increase of congestion in the right basal and left upper zones. Lateral view shows little change.'

At Eighteen Months (February, 1946)

(7 years 5 months)

Height and Weight. 47 inches (increase of 1 inch).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 21 d. 'As compared with six months ago the antero-posterior film shows slight reduction in amount of root shadow generally and a slight decrease in amount of lung striation.

Lateral view confirms general improvement and shows much clearer basal zone.'

At Two Years (August, 1946)

(7 years 11 months)

Height and Weight. 48.25 inches (increase of 1.25 inches).
45 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 21 e. 'As compared with six months ago there is little change to be noted.

As compared with two years ago and allowing for the changes due to growth, very little difference is to be noted in the appearance of the root shadows during the past two years. The shadows remain diffuse, though there is slight firming of the glands along right and left upper lobe bronchi. The lateral view shows calcification of some glands along right basal branch bronchus.'

CYRTOMETER TRACINGS

(one quarter natural size)

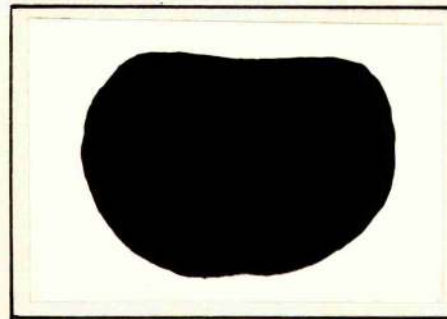
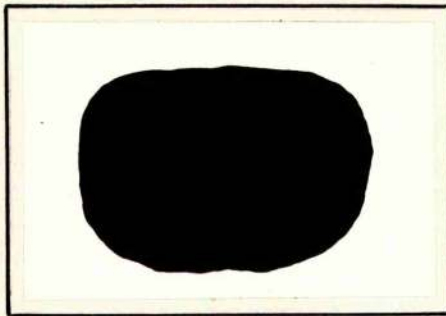


Fig. 21.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Fig. 21 a.

At Two Years

A-P. diameter 5.25 inches
L. diameter 7.50 inches

Circumference of Chest During Quiet Respiration

20.5 inches.

22.0 inches.

(Female. 6 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Cotton	Knickers	Silk
Knickers	Wool	Petticoat	Cotton
Petticoat	Cotton		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Frock	Cotton
Skirt	Cloth		
Coat	Tweed		
Scarf	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

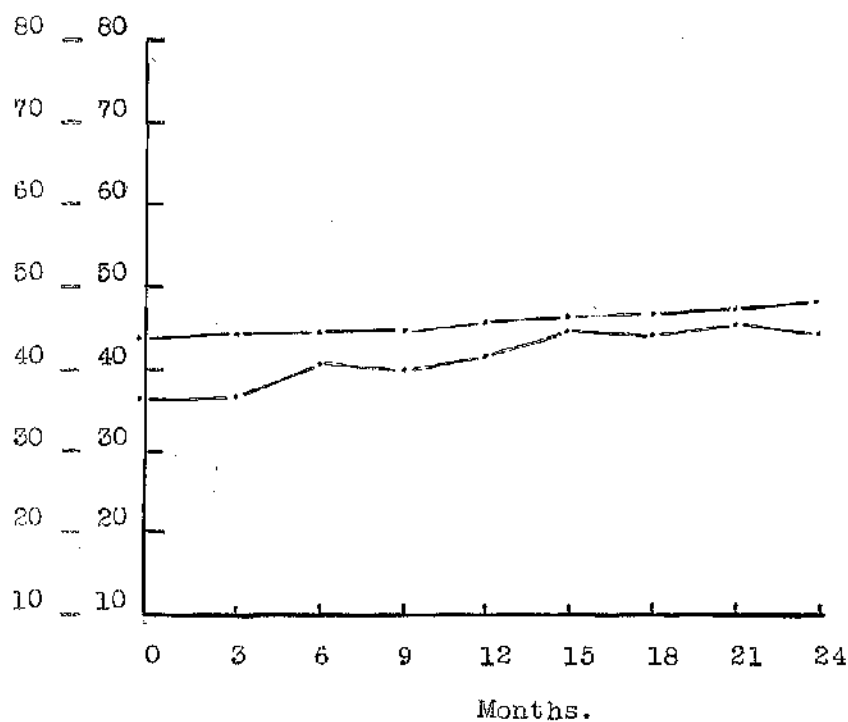
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



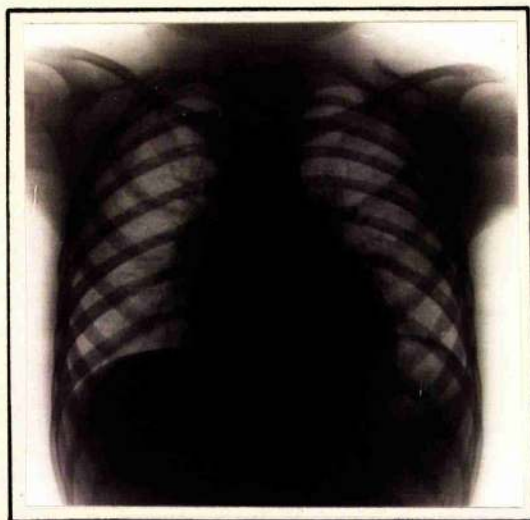


Plate 21. At First Examination.

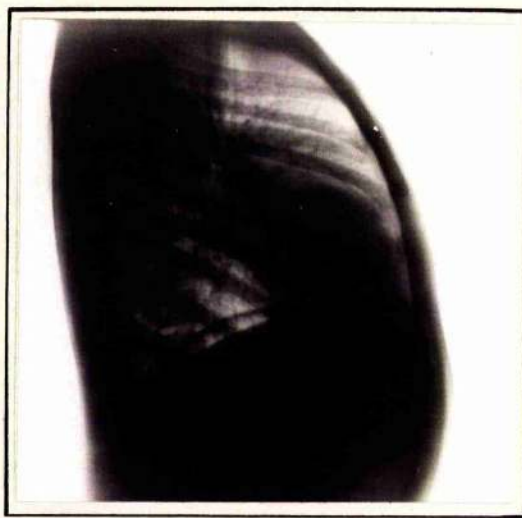
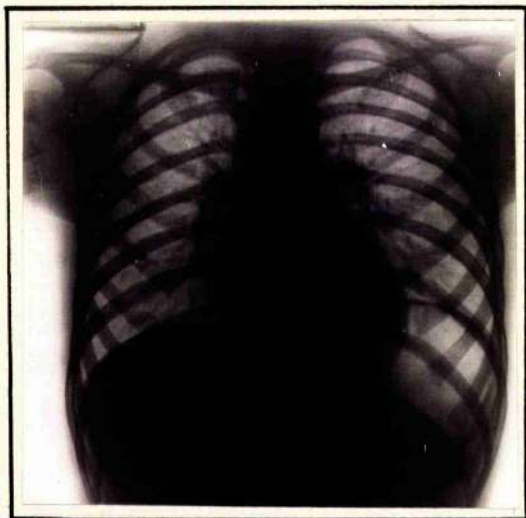


Plate 21 a. At Three Months.

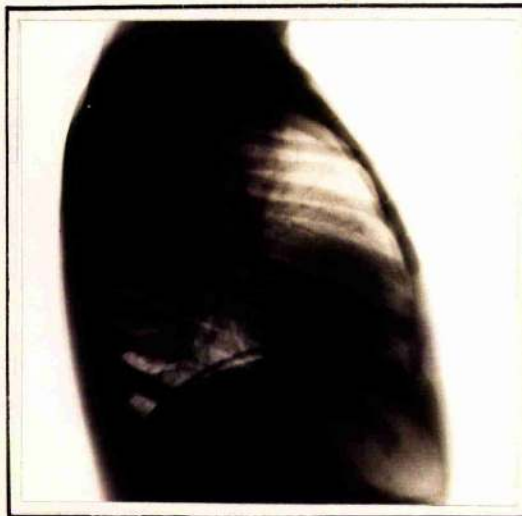
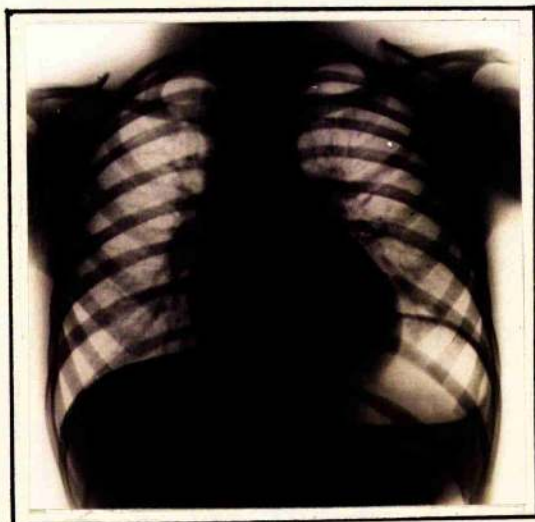


Plate 21 b. At Six Months.

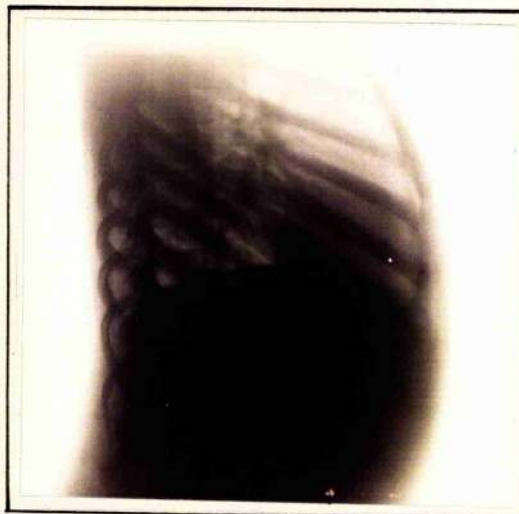
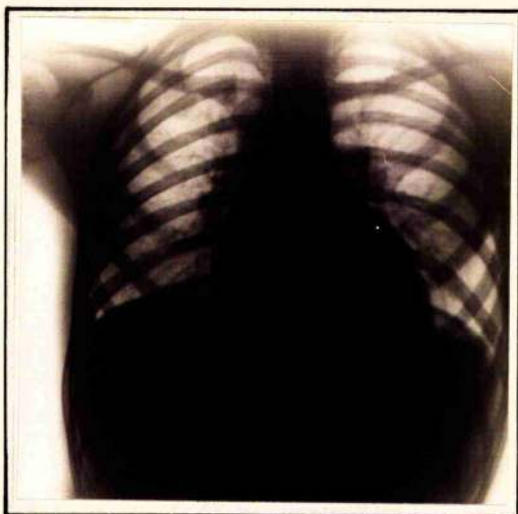


Plate 21 c. At One Year.

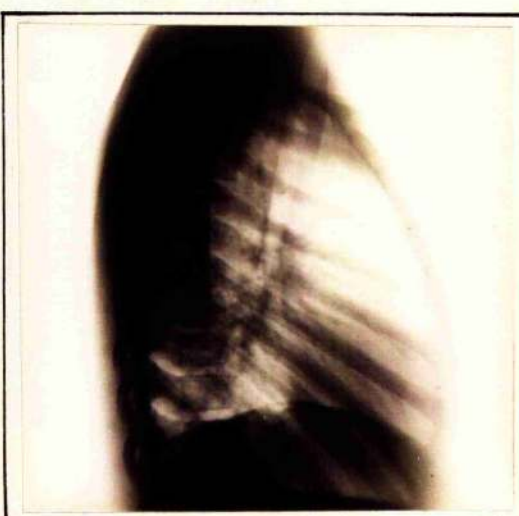
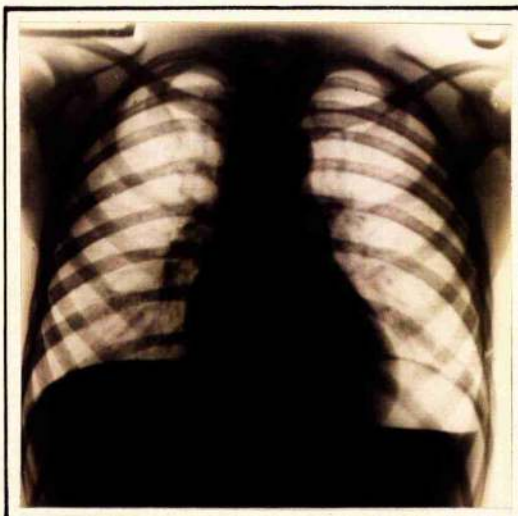


Plate 21 d. At Eighteen Months.

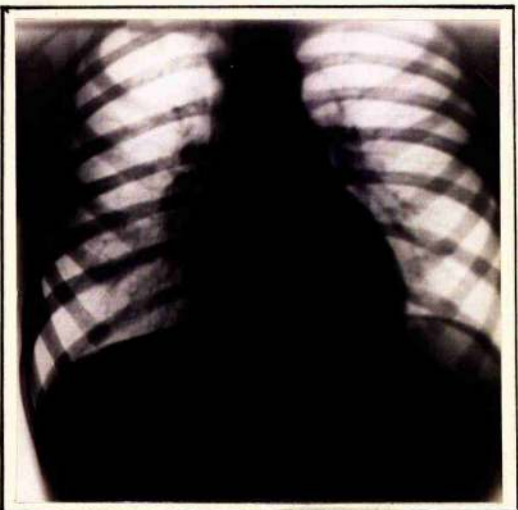


Plate 21 e. At Two Years.

Name. J. McC. Sex. Male. Age. 2 years 2 months.

Date of Birth. 29/6/42.

Feeding. At breast for ten months.

Family History. Parents are alive and well. One sister aged six years has whooping cough (case 21). No family history of tuberculosis.

Previous Illnesses

Bronchitis	September, 1943.
Mumps	December, 1943.
Chickenpox	March, 1944.
Whooping cough	July, 1944.

Environment and Parental Care. The family resides in a two room and kitchen house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944

(2 years 2 months)

Height and Weight. 34 inches. 26 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	4321	1234
Teeth in lower jaw:	4321	1234
Total number of teeth:	16	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Slight enlargement of tonsils and adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci and diphtheroid types.

Haematology.

Erythrocytes	5,500,000 per c.mm.
Leucocytes	14,955 per c.mm.
Haemoglobin	90 per cent. Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils	30.25 per cent.	(4,523 per c.mm.)
Eosinophils	4.75 per cent.	(710 per c.mm.)
Basophils	0.50 per cent.	(74 per c.mm.)
Lymphocytes	60.75 per cent.	(9,085 per c.mm.)
Monocytes	3.75 per cent.	(560 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	10	20	53	7	0

Physical Examination of Chest. Muscular development moderate. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 6 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign

was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 22. 'Chest of good size and symmetrical. Heart normal in size.

Lungs show a generalised increase of striation, soft and congested in appearance. The root shadows share in this congestion. Small gland masses are seen in the midst of the right root and along the upper lobe bronchi.'

SUBSEQUENT EXAMINATIONS

In September the child had broncho-pneumonia followed by Sonne dysentery.

At Three Months (November, 1944)

(2 years 5 months)

Height and Weight. 34.5 inches (increase of 0.5 inch).
29 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. Breath sounds vesicular and harsh with a few scattered rhonchi, especially on right side. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. Cough, especially after lying down in bed at night.

Radiographic Findings

Plate 22 a. 'Slight diminution in extent of right root shadow, with a general firming up of the shadows, and especially of the glands in the central bronchial group. A similar but not so marked hardening is noted in the upper pole of the left root shadow.'

At Six Months (February, 1945)

(2 years 8 months)

Height and Weight. 35.25 inches (increase of 0.75 inch).
29 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. Breath sounds harsh with scattered rhonchi throughout both sides of chest. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent.

For the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 22 b. 'Scattered areas of congestion throughout both lung fields. Root shadows show similar congestion, and the glands are also less well defined, because of periaadenitis.'

In June the child had a cough for two weeks, especially after lying down in bed at night.

At One Year (August, 1945)

(3 years 2 months)

Height and Weight. 37 inches (increase of 1.75 inches).
31 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 22 c. 'Root congestion unchanged. Scattered areas of congestion throughout lung fields, rather more pronounced on right side, superimposed on general peribronchial congestion.'

In November the child had a whooping cough-like cough for four weeks, especially after lying down in bed at night.

At Eighteen Months (February, 1946)

(3 years 8 months)

Height and Weight. 39 inches (increase of 2 inches).
32 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 22 d. 'As compared with six months ago little change is to be noted in either antero-posterior or lateral views.'

At Two Years (August, 1946)

(4 years 2 months)

Height and Weight. 39.75 inches (increase of 0.75 inch).
34 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 22 e. 'As compared with six months ago the peribronchial congestion is more marked.

As compared with two years ago much root and peribronchial congestion remains. Healed calcified primary focus of tuberculosis in right upper lobe, with calcification of glands in right root. Glands along left upper lobe bronchi show some congestion. Lateral view shows calcification of glands along right upper lobe bronchi.'

CYRTOMETER TRACINGS

(one quarter natural size)

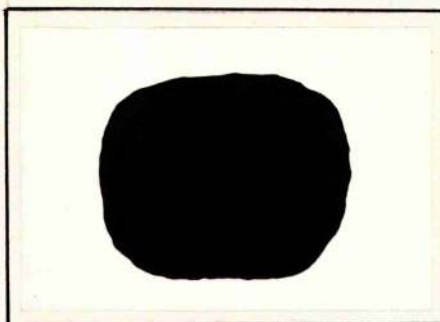


Fig. 22.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 6.00 inches.

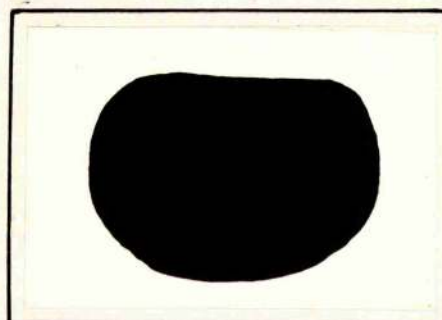


Fig. 22 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

20.5 inches.

21.0 inches.

(Male. 2 years 2 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool	Pants	Wool

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Wool	Shirt	Cotton
Trousers	Flannel	Trousers	Flannel
Pullover	Wool		
Coat	Tweed		
Scarf	Wool		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

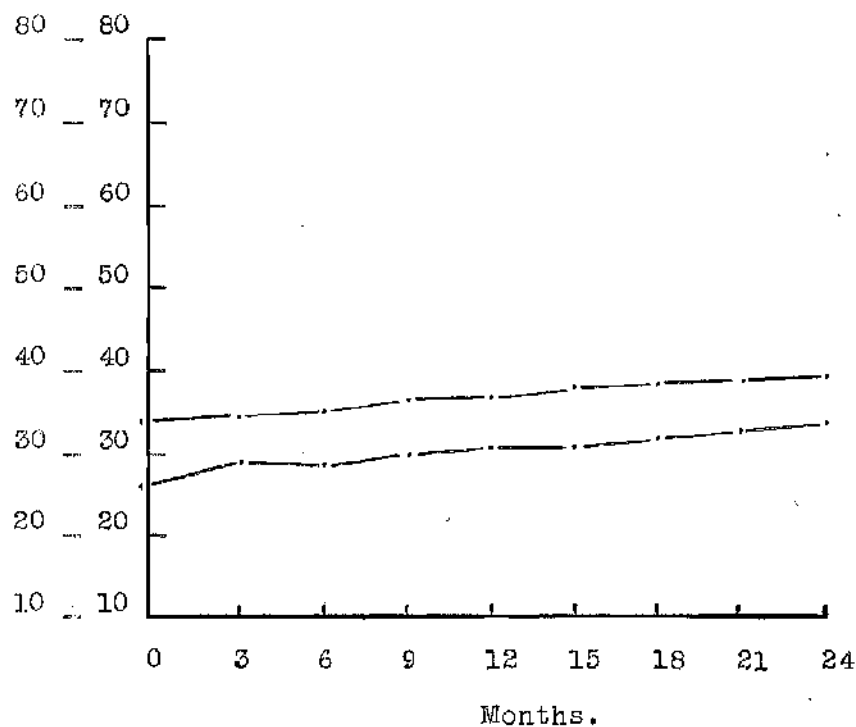
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



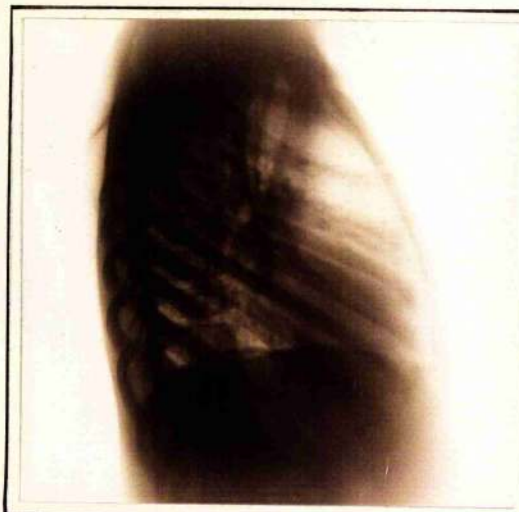
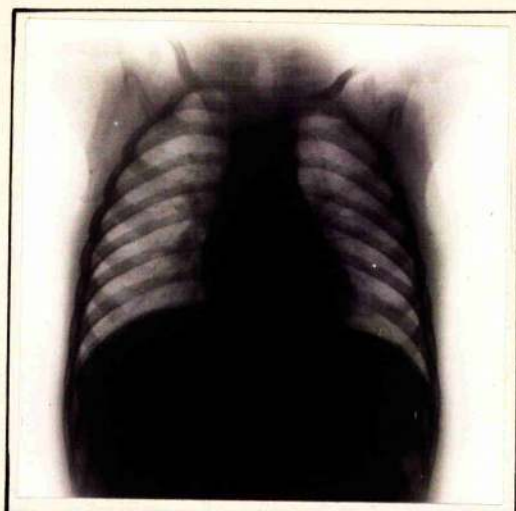


Plate 22. At First Examination.

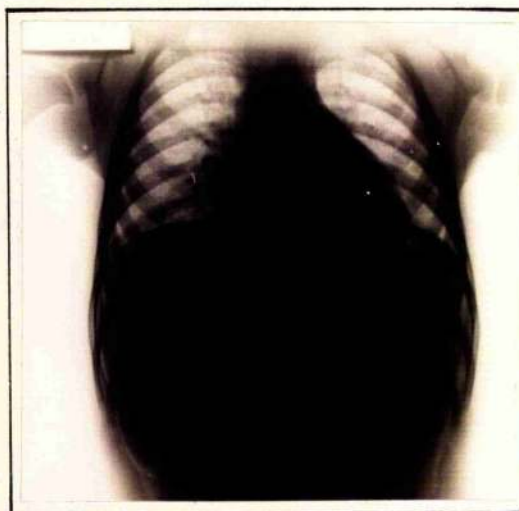
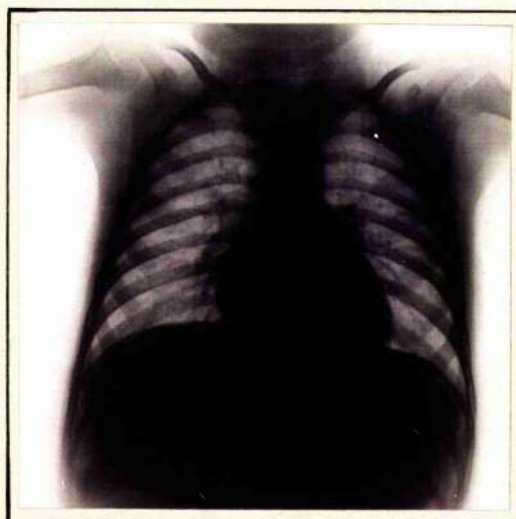


Plate 22 a. At Three Months.

Plate 22 b. At Six Months.

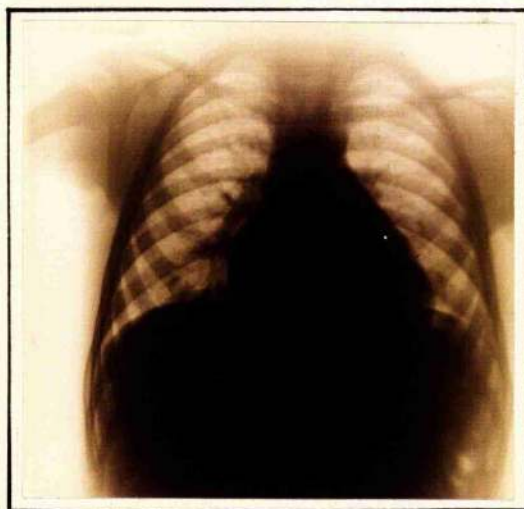


Plate 22 c. At One Year.

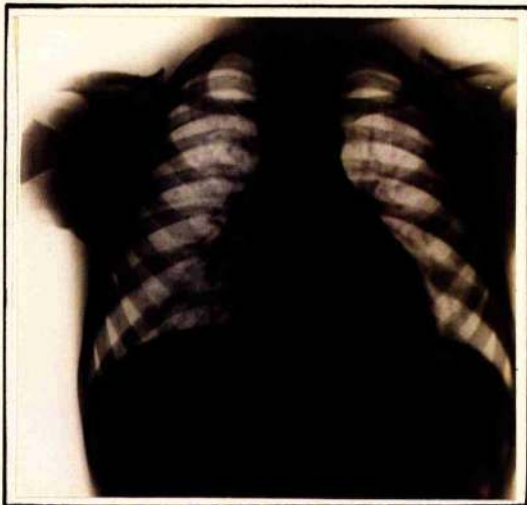


Plate 22 d. At Eighteen Months.

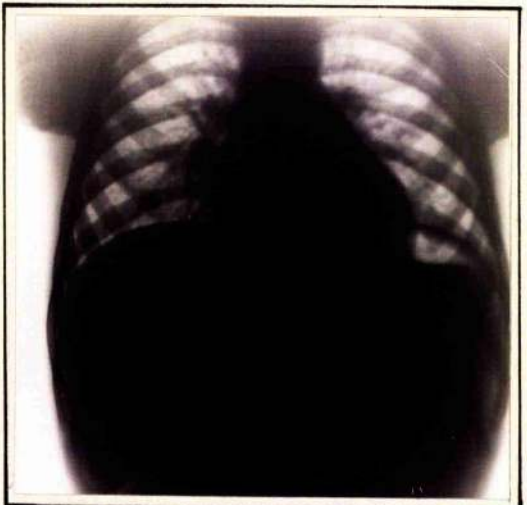


Plate 22 e. At Two Years.

Name. W.Y. Sex. Male. Age. 6 years 6 months.

Date of Birth. 23/3/38.

Feeding. At breast for one month and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. Three brothers aged sixteen, fourteen and thirteen years all healthy. One sister aged eleven years is healthy. No family history of tuberculosis.

Previous Illnesses

Broncho-pneumonia March, 1941.
Whooping cough July, 1944.

Environment and Parental Care. The family resides in a two room and kitchen house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION.

September, 1944.

(6 years 6 months)

Height and Weight. 41.75 inches. 40 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. Slight nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, pneumococci, diphtheroids and streptococci including haemolytic strains.

Haematology.

Erythrocytes 4,630,000 per c.mm.
Leucocytes 9,533 per c.mm.
Haemoglobin 75 per cent. Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils 49.75 per cent. (4,742 per c.mm.)
Eosinophils 7.50 per cent. (714 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 39.25 per cent. (3,721 per c.mm.)
Monocytes 3.50 per cent. (333 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	14	46	35	6	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 5.25 inches. Lateral diameter 7.25 inches. Skin texture coarse. Enlargement of anterior superficial veins not

noted. No enlarged glands. Slight dullness over first and second dorsal vertebrae. Breath sounds vesicular with scattered moist sounds throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids and pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 23. 'Chest well formed and symmetrical. Heart normal in size.

Right lung: Diffuse root shadow with no definite glandular masses. Slight increase of striation basally.

Left lung: Root shadow shows well defined glandular masses, one group along upper lobe bronchi, another at tracheo-bronchial angle and a third at root of lower bronchi. Increased striation into upper lobe and basally.

Lateral view shows increased striation into upper lobe and posterior basal zone. Glandular masses well defined.'

SUBSEQUENT EXAMINATIONS

The child had a cough during October and November, especially after lying down in bed at night.

At Three Months (December, 1944)

(6 years 9 months)

Height and Weight. 42.25 inches (increase of 0.5 inch). 40 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. Breath sounds vesicular and harsh, especially over anterior and upper part of left side of chest, with a few scattered rhonchi. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. Cough, especially after lying down in bed at night.

Radiographic Findings

Plate 23 a. 'Little change to record in general appearance. Congestion around roots and bronchi persists.

Lateral view shows definite calcification of glands in all groups.'

At Six Months (March, 1945)

(7 years)

Height and Weight. 43 inches (increase of 0.75 inch). 41 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was de-

tected. A few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. Cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human) and tuberculin jelly patch tests were positive. Vollmer patch test (bovine) was negative.

Radiographic Findings

Plate 23 b. 'Little change in general appearance of lung fields. Left upper bronchial glands appear more defined than before.

Lateral view confirms increasing definition of glands.'

At One Year (September, 1945)

(7 years 6 months)

Height and Weight. 44 inches (increase of 1 inch).
42 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of both sides of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 23 c. 'Root shadows remain as diffusely enlarged as in March, 1945, and the lung striation is, if anything, rather more prominent now.'

The child had a cough during January and February, especially in the morning.

At Eighteen Months (March, 1946)

(8 years)

Height and Weight. 45 inches (increase of 1 inch).
46 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. Slight dullness over first and second dorsal vertebrae. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was present. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 23 d. 'Diminution in quantity of root shadow generally and hardening of the glandular groups along right and left upper lobe bronchi. Diminution in amount of lung striation.

Lateral view shows a better definition of bronchial tree with reduction in peribronchial congestion.'

At Two Years (September, 1946)

(8 years 6 months)

Height and Weight. 46.25 inches (increase of 1.25 inches).
47 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

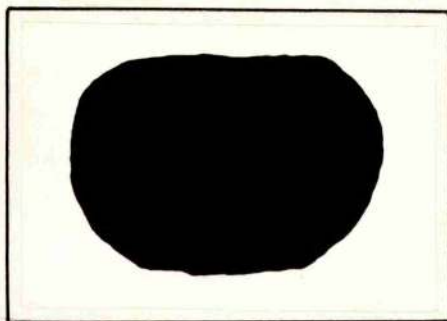
Radiographic Findings

Plate 23 e. 'Compared with six months ago there is no change to be noted.'

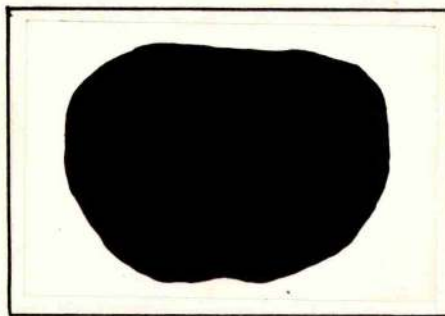
As compared with two years ago the root shadows remain as diffuse as before, and only those glands already calcified (left upper bronchial group) show calcification. Lateral view shows no change: good calcification of glands.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 23.At First Examination

A-P. diameter 5.25 inches.
L. diameter 7.25 inches.

Fig. 23 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 7.75 inches.

Circumference of Chest During Quiet Respiration

21.5 inches.

23.0 inches.

(Male. 6 years 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton

Shoes and stockings.

Shoes and stockings.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Wool	Shirt	Cotton
Pullover	Wool	Pullover	Wool
Trousers	Corduroy	Trousers	Corduroy
Coat	Nap		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

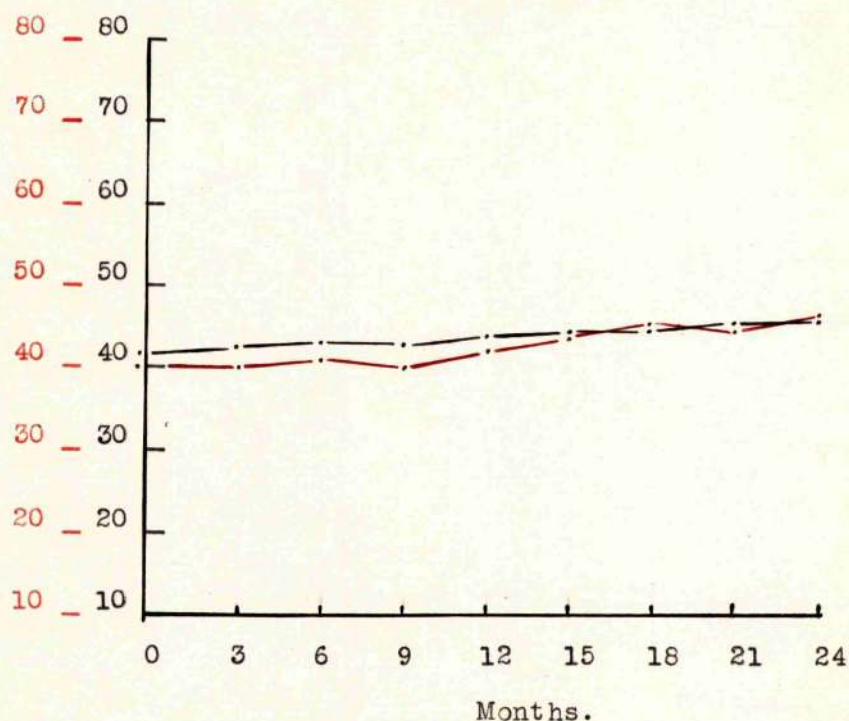
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



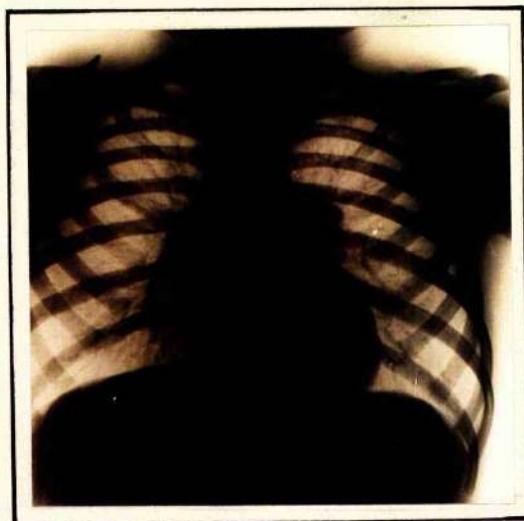


Plate 23. At First Examination.

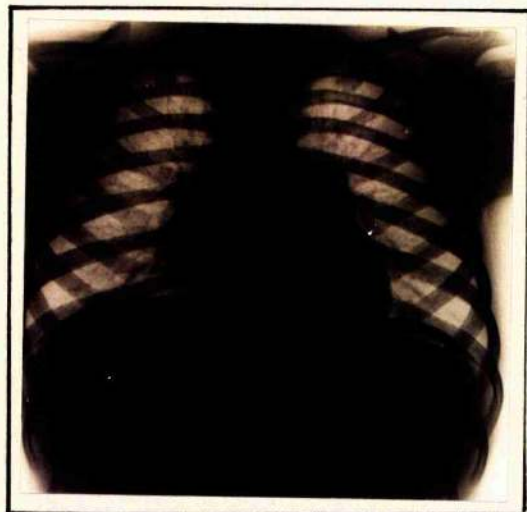


Plate 23 a. At Three Months.

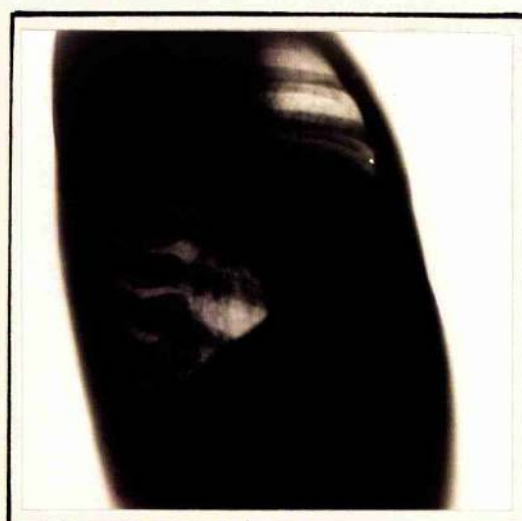
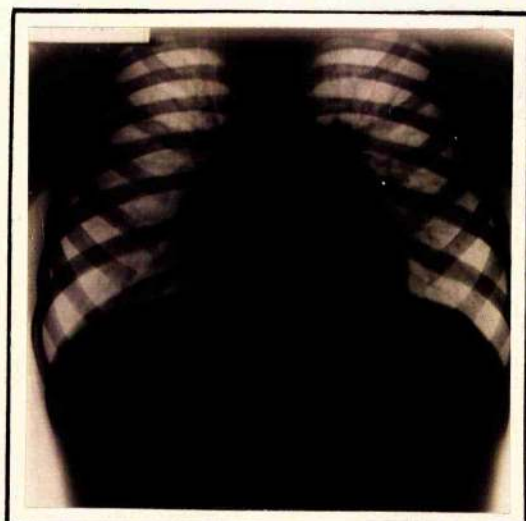


Plate 23 b. At Six Months.

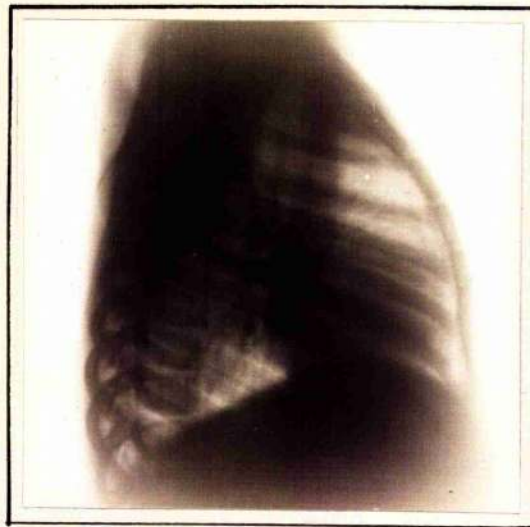
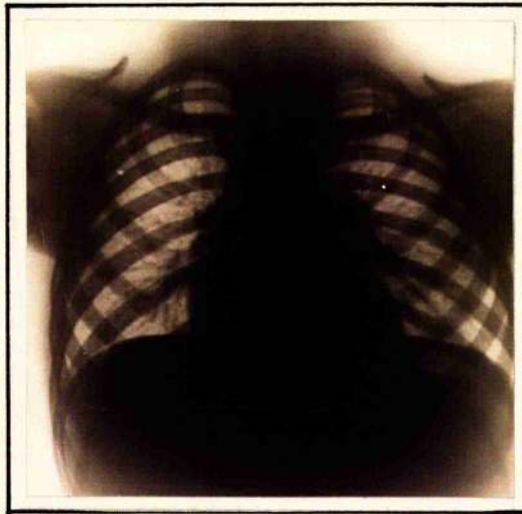


Plate 23 c. At One Year.



Plate 23 d. At Eighteen Months.

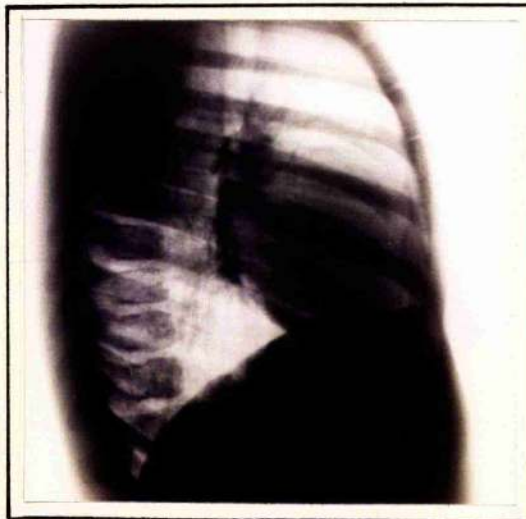
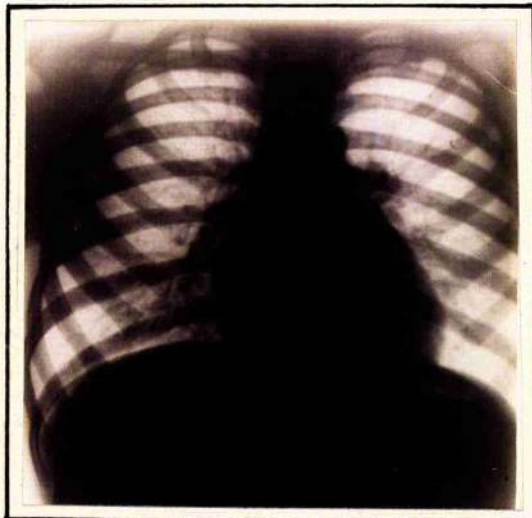


Plate 23 e. At Two Years.

Name. S.D. Sex. Female. Age. 3 years 3 months.

Date of Birth. 21/6/41.

Feeding. At breast for twelve months.

Family History. Parents are alive and well. One sister aged four months has whooping cough. No family history of tuberculosis.

Previous Illnesses

Gastro-enteritis	September, 1941.
Bronchitis	February, 1942.
Measles	January, 1944.
Whooping cough	August, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

September, 1944.

(3 years 3 months)

Height and Weight. 35.75 inches. 26 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Slight enlargement of tonsils and adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, diphtheroids and streptococci.

Haematology.

Erythrocytes	5,620,000 per c.mm.
Leucocytes	10,250 per c.mm.
Haemoglobin	87 per cent. Colour Index 0.77

Differential Leucocyte Count:-

Neutrophils	44.75 per cent. (4,586 per c.mm.)
Eosinophils	4.50 per cent. (461 per c.mm.)
Basophils	0.75 per cent. (76 per c.mm.)
Lymphocytes	48.25 per cent. (4,945 per c.mm.)
Monocytes	1.75 per cent. (179 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	15	38	36	10	1

Physical Examination of Chest. Muscular development fair. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 19.25 inches. Antero-posterior diameter 5 inches. Lateral diameter 6.5 inches. Skin texture fine. Slight prominence of anterior superficial veins over upper part of chest. No enlarged glands. Percussion note

clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 24. 'Small broad chest, symmetrical. Heart normal in size.

Right lung: Diffuse enlargement of root shadow, soft and congested. Small glands visible along upper lobe bronchi, in centre of root, and along lower lobe bronchi. The upper and lower lobe bronchi are exaggerated.

Left lung: A similar root shadow in the left.

Lateral view shows glands only along upper lobe bronchi.'

SUBSEQUENT EXAMINATIONS

At Three Months (December, 1944)

(3 years 6 months)

Height and Weight. 36 inches (increase of 0.25 inch). 28 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Radiographic Findings

Plate 24 a. 'Right root shadow shows little change.

The left root is less congested at its upper pole and the left upper lobe bronchi are showing less evidence of surrounding congestion.'

At Six Months (March, 1945)

(3 years 9 months)

Height and Weight. 36.5 inches (increase of 0.5 inch). 29 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins less. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 24 b. 'Marked improvement generally as compared with six months ago. There is much less root congestion and all glands are small and well defined.'

At One Year (September, 1945)

(4 years 3 months)

Height and Weight. 38.25 inches (increase of 1.75 inches).
30 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 24 c. 'In comparison with films of six months ago there is little diminution in the extent of the root shadow, which is still soft and congested. The right mid-bronchial glands are small and firm. The right lower lobe bronchi show some congestion and there is an increase in the accentuation of the left upper lobe bronchial tree.

Lateral view shows firm glands of mid-bronchial group and a few soft glands along the right basal bronchi.'

In October the child had a cough for two weeks, especially after lying down in bed at night. In January she had a cough which had a whooping cough-like character for four weeks and which was worse after lying down in bed at night.

At Eighteen Months (March, 1946)

(4 years 9 months)

Height and Weight. 38.75 inches (increase of 0.5 inch). 32 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 24 d. 'Definite improvement in root shadows, with diminution of congestive cloudiness. The periglandular inflammation along the left upper lobe bronchus has subsided leaving three small hardening gland shadows. The right mid-bronchial group of glands show similar improvement. The lung fields are clearer too.

Lateral view shows little change.'

At Two Years (September, 1946)

(5 years 3 months)

Height and Weight. 40.5 inches (increase of 1.75 inches).
32 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited

through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 24 e. 'As compared with six months ago there is no appreciable difference.

Lateral view shows less congestion.

As compared with two years ago the root shadow is still diffuse, but with slightly less congestion and with numerous small calcifying glands in right upper and mid and left upper bronchial groups.

Lateral view shows no appreciable difference.'

CYRTOMETER TRACINGS

(one quarter natural size)

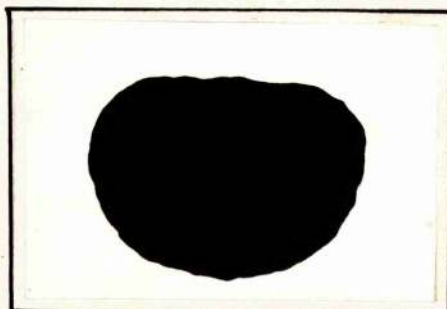


Fig. 24.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 6.50 inches.

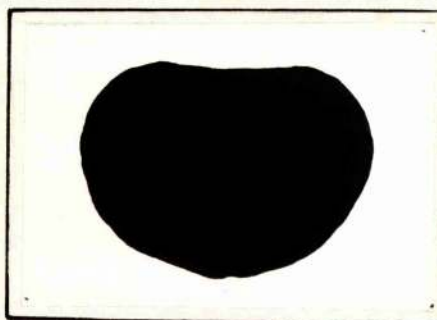


Fig. 24 a.

At Two Years

A-P. diameter 5.00 inches. A-P. diameter 5.00 inches.
L. diameter 6.50 inches. L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

19.25 inches.

20.00 inches.

(Female. 3 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Knickers	Cotton	Knickers	Cotton
Petticoat	Cotton	Petticoat	Cotton

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Frock	Cotton
Skirt	Tweed		
Coat	Nap		

Hat.

No hat.

Overclothed:

Constriction of chest due to clothing:

No.

None.

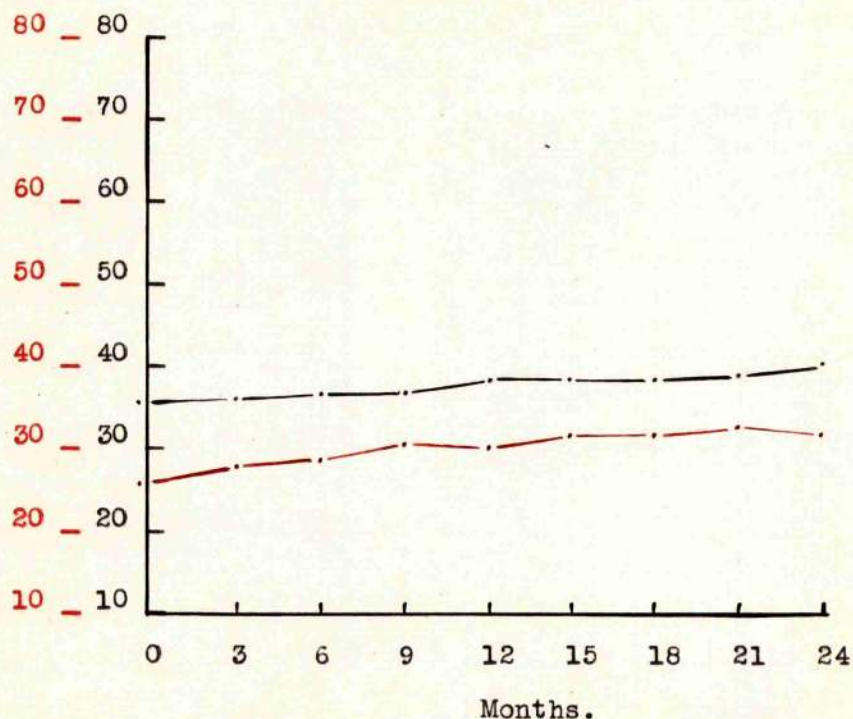
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



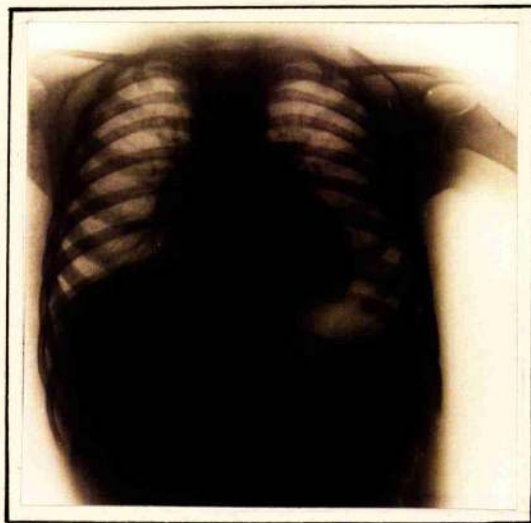


Plate 24. At First Examination.

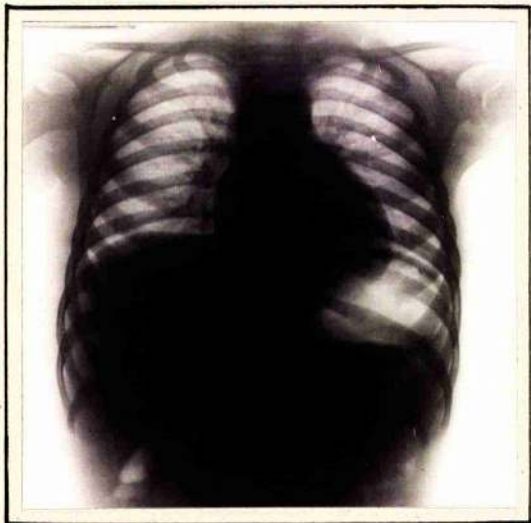


Plate 24 a. At Three Months.

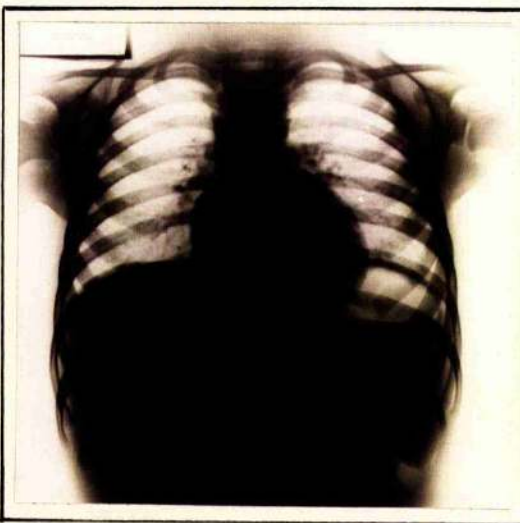


Plate 24 b. At Six Months.

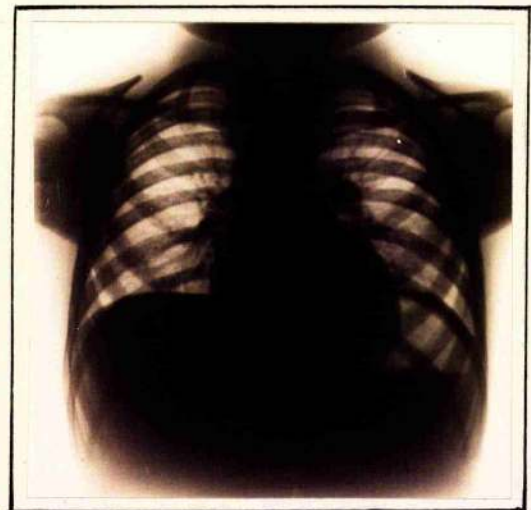


Plate 24 c. At One Year.

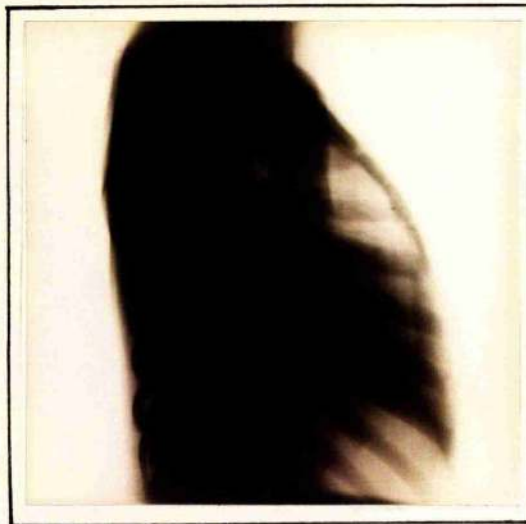
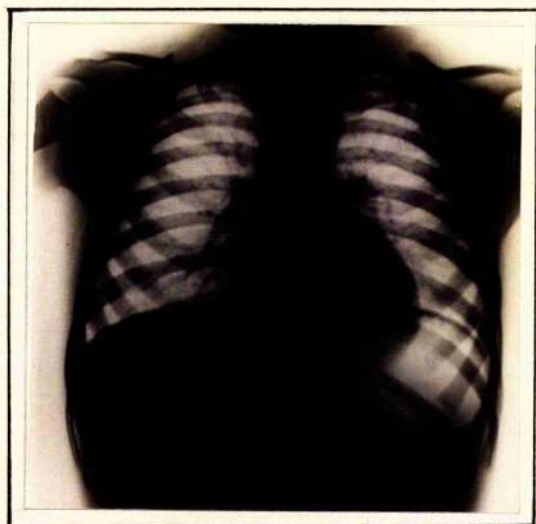


Plate 24 d. At Eighteen Months.

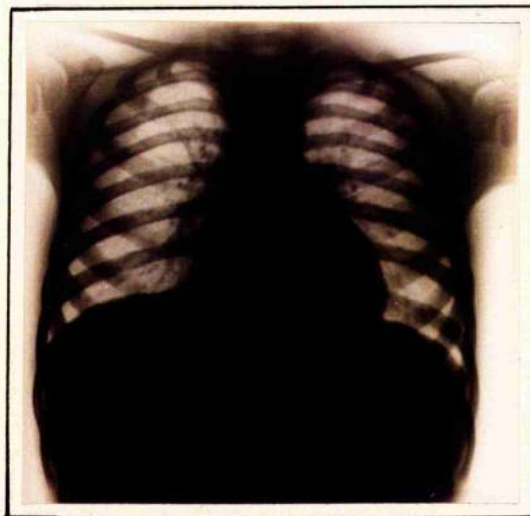


Plate 24 e. At Two Years.

Name. F.T. Sex. Male. Age. 3 years 5 months.

Date of Birth. 15/4/41.

Feeding. At breast for nine months.

Family History. Parents are alive and well. One brother aged seven months is healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough August, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

September, 1944.

(3 years 5 months)

Height and Weight. 38 inches. 35 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth sound, decayed ones have been removed.

Teeth in upper jaw:	543--	--3-5
Teeth in lower jaw:	54321	12345
Total number of teeth:		15

Ear, Nose and Throat. Ears healthy. No nasal discharge. No enlargement of tonsils or adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, diphtheroids and streptococci including haemolytic strains.

Haematology.

Erythrocytes	5,550,000 per c.mm.
Leucocytes	9,733 per c.mm.
Haemoglobin 88 per cent.	Colour Index 0.80

Differential Leucocyte Count:-

Neutrophils	44.50 per cent.	(4,331 per c.mm.)
Eosinophils	2.25 per cent.	(218 per c.mm.)
Basophils	0.50 per cent.	(48 per c.mm.)
Lymphocytes	45.50 per cent.	(4,428 per c.mm.)
Monocytes	7.25 per cent.	(705 per c.mm.)

Arneth Count (Cooke):-

Class.	1	2	3	4	5
Per cent.	13	31	51	3	2

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 6.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular and harsh with a few scattered moist sounds throughout both sides of chest. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 25. 'Chest well formed and regular. Heart normal in size.

Right lung: Soft congested increase in root shadow with enlargement of tracheo-bronchial and bronchial gland groups. Generalised soft increase of lung striation.

Left lung: Diffuse root shadow, soft and congested as on right. No definite glandular masses visible.

Lateral view shows glandular enlargement throughout root shadow, but most marked in upper half. Increased bronchial marking into upper lobe and to lesser extent into posterior basal zone.'

SUBSEQUENT EXAMINATIONS

At Three Months (December, 1944)

(3 years 8 months)

Height and Weight. 39 inches (increase of 1 inch). 39.5 pounds (gain of 4.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 25 a. 'Slight improvement in extent of root shadow, which is now less prominent at upper poles. The quality of root shadow is also improved, being less indefinite than in last film and there is a reduction in the congestion.'

At Six Months (March, 1945)

(3 years 11 months)

Height and Weight. 39.5 inches (increase of 0.5 inch). 38 pounds (loss of 1.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 25 b. 'There is more root and periglandular congestion showing now than compared with the films of December, but less than in September, 1944.'

At One Year (September, 1945)

(4 years 5 months)

Height and Weight. 41 inches (increase of 1.5 inches). 39 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 25 c. 'Definite improvement in appearance of the root shadows on right side. The glands are settling down and becoming more defined. Further, there is reduction in amount of lung striation. The improvement on the left side is less marked.'

Lateral view shows much better definition of mid-bronchial glands.'

At Eighteen Months (March, 1946)

(4 years 11 months)

Height and Weight. 42.5 inches (increase of 1.5 inches). 40 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

For the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 25 d. 'Compared with six months ago there is slight improvement in root shadow, with firming of glands along the right upper lobe bronchus. The lung fields show less peribronchial striation.'

Lateral view shows less congestion around bronchial tree generally.'

In June the child had chickenpox.

At Two Years (September, 1946)

(5 years 5 months)

Height and Weight. 43 inches (increase of 0.5 inch). 41 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 25 e. 'Present film shows little change from that taken in March, 1946. Lateral view shows no significant change.

As compared with film of September, 1944, the root shadows remain diffusely enlarged and still soft in texture, though there has been a slight firming of the mid-bronchial glands on the right. No calcification of glands noted. The peribronchial congestion into the right base is present still, but diminished in amount.

Lateral view shows a slight improvement in the degree of peribronchial congestion, though in extent it remains unchanged.'

CYRTOMETER TRACINGS

(one quarter natural size)

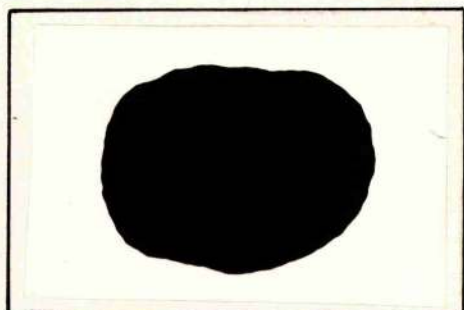


Fig. 25.

At First Examination.

A-P. diameter 5.00 inches.
L. diameter 6.50 inches.

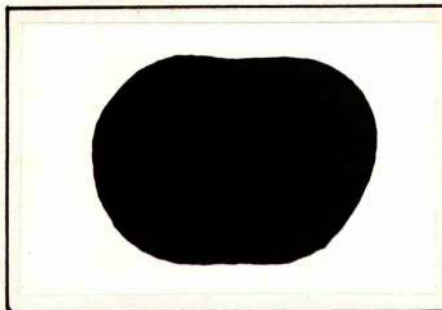


Fig. 25 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 6.75 inches.

Circumference of Chest During Quiet Respiration

20.50 inches.

21.00 inches.

(Male. 3 years 5 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Pullover	Wool	Trousers	Flannel
Trousers	Flannel		
Coat	Tweed		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

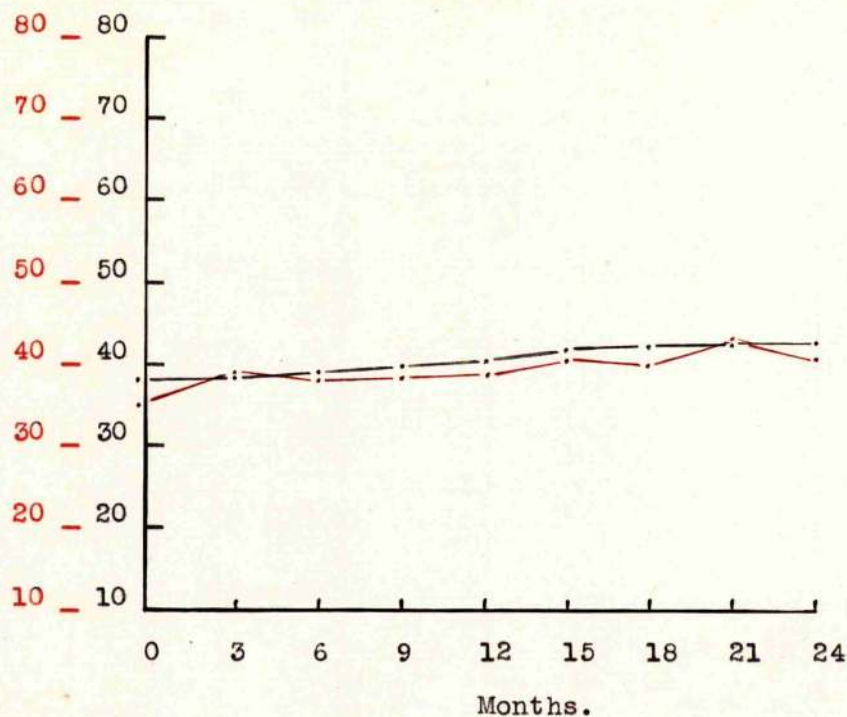
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



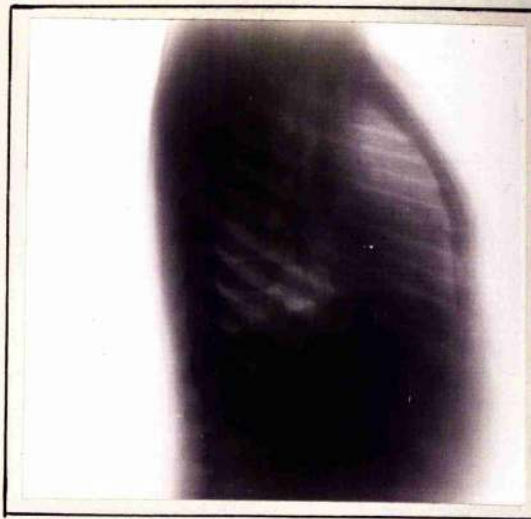
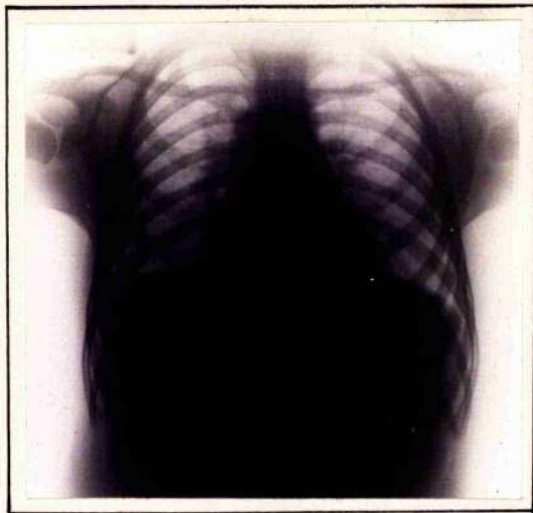


Plate 25. At First Examination.

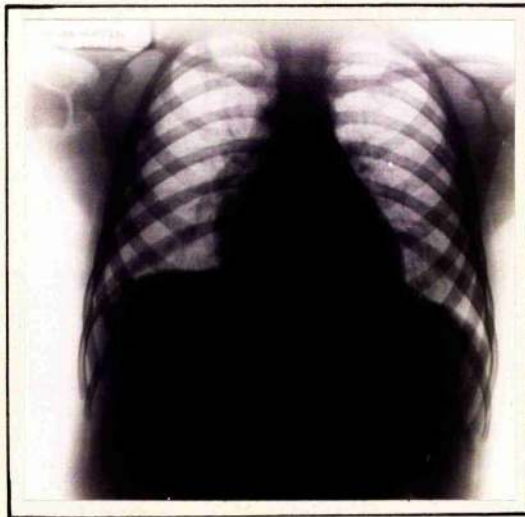


Plate 25 a. At Three Months.

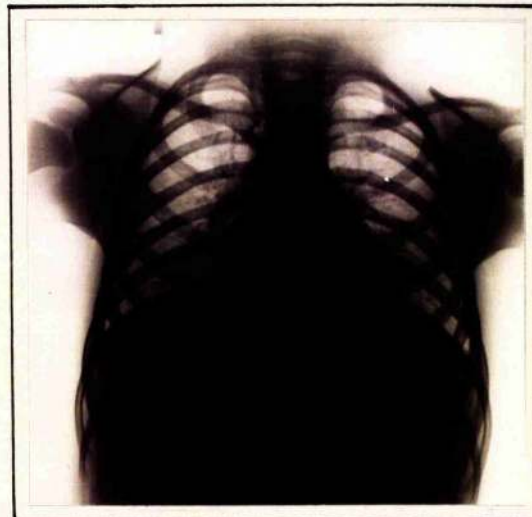


Plate 25 b. At Six Months.

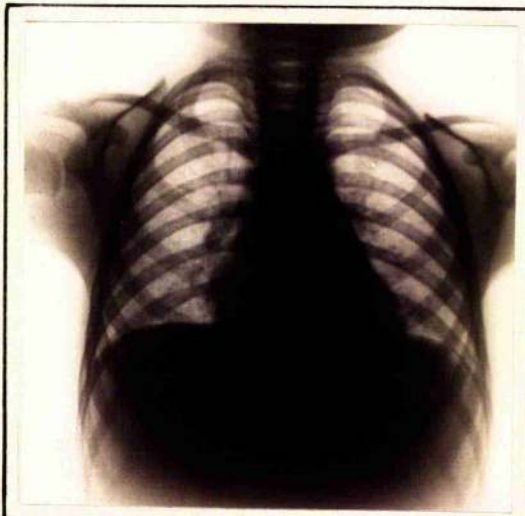


Plate 25 c. At One Year.

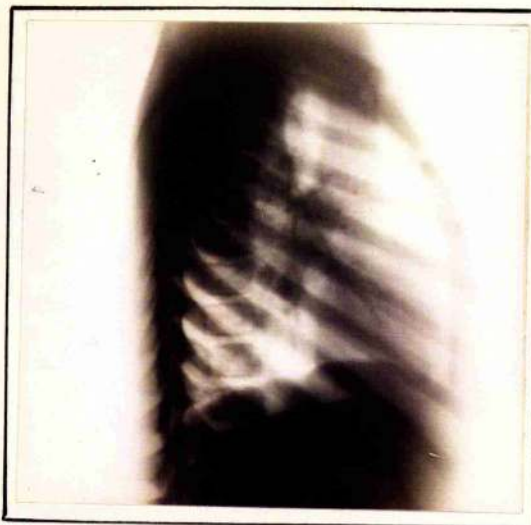
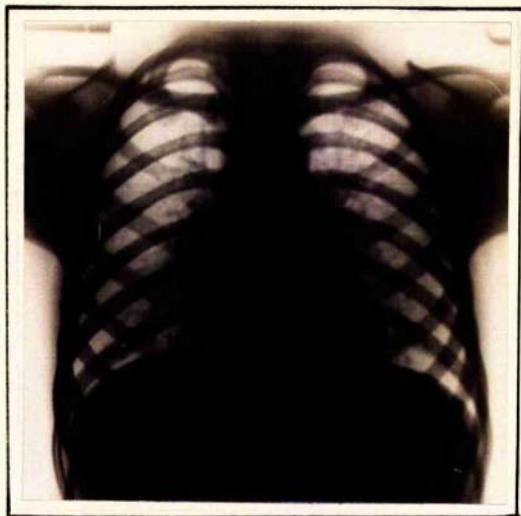


Plate 25 d. At Eighteen Months.

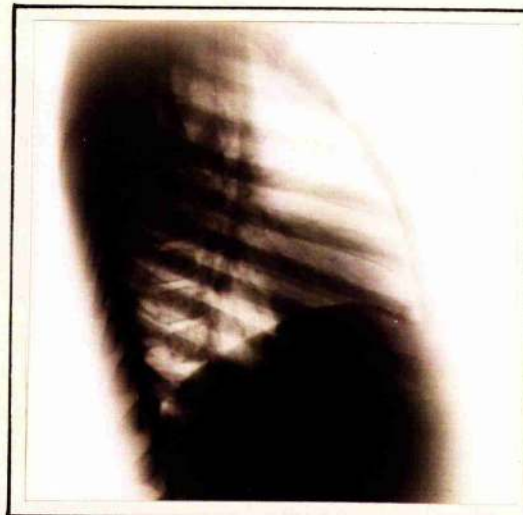
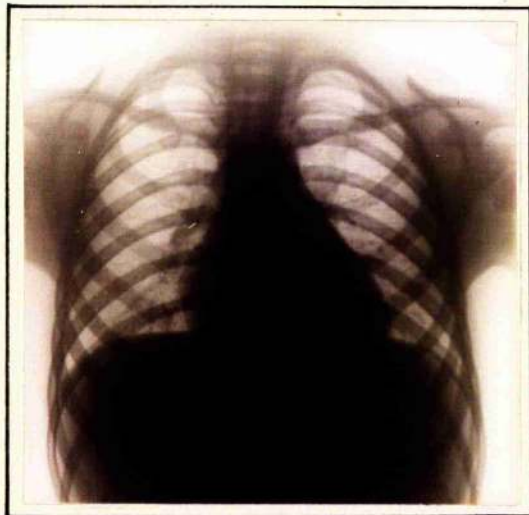


Plate 25 e. At Two Years.

Name. J.B. Sex. Female. Age. 1 year 9 months.

Date of Birth. 8/1/43.

Feeding. At breast for twelve months.

Family History. Parents are alive and well. Three brothers, aged seven, six and four years have whooping cough (cases 27, 28 and 29). No family history of tuberculosis.

Previous Illnesses

Measles February, 1943.

Whooping cough September, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the country. The windows are kept open at night. The child lacks care and attention.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(1 year 9 months)

Height and Weight. 31 inches. 23 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw:	4321	1234
Teeth in lower jaw:	4321	1234
Total number of teeth:	16	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, staphylococci (aureus), pneumococci and Gram-negative bacilli.

Haematology.

Erythrocytes	4,130,000 per c.mm.
Leucocytes	16,444 per c.mm.
Haemoglobin	92 per cent. Colour Index 0.91

Differential Leucocyte Count:-

Neutrophils	33.75 per cent. (5,549 per c.mm.)
Eosinophils	13.00 per cent. (2,137 per c.mm.)
Basophils	0.00 per cent. (0 per c.mm.)
Lymphocytes	50.75 per cent. (8,345 per c.mm.)
Monocytes	2.50 per cent. (411 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	11	30	52	6	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 19 inches. Antero-posterior diameter 5.0 inches. Lateral diameter 5.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. Cough and an occasional whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 26. 'Moderately well formed chest. Some degree of flattening over lower halves of each side of chest. Heart shadow enlarged on right side. Some coarse generalised increased mottling throughout both lungs, especially on right side. Owing to the cardiac enlargement it was not possible to distinguish the hilar shadows.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(2 years)

Height and Weight. 31.75 inches (increase of 0.75 inch). 24 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough.

Radiographic Findings

Plate 26 a. 'Both hilar shadows are slightly enlarged. Both lungs show a generalised increase in moderate lung mottling, this finding being somewhat more marked in the right side than in the left. The plate findings still show evidence of a fairly extensive catarrhal condition involving both lungs, but being most marked on the right side.'

When compared with the plate taken in October last, there is evidence to show a degree of improvement. The amount of mottling itself appears to be of a slightly finer nature than was seen in October last.'

At Six Months (April, 1945)

(2 years 3 months)

Height and Weight. 32.5 inches (increase of 0.75 inch). 26 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 26 b. 'The hilar shadows are both enlarged and numerous fibrous nodules are present in these regions. A certain amount of generalised increased mottling is present throughout both lungs.'

Compared with plates taken in October, 1944 and January, 1945 all three plates are very similar, though there is evidence of

an increase in the degree of fibrosis in the hilar shadows in the present plate. These shadows are now decreased in size and are smaller in area than was noted previously.'

At One Year (October, 1945)

(2 years 9 months)

Height and Weight. 34 inches (increase of 1.5 inches). 29 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 26 c. 'I have compared the plate with those taken in October, 1944 and April, 1945. The heart shadow is central and each successive plate shows a definite diminution of the broadening of the upper mediastinum noted in the original plate. The hilar shadows are still enlarged but they appear to be smaller than were noted previously. There is still a considerable amount of moderate mottling in the lower half of the right lung and the middle third of the left lung. The amount of mottling noted at present is very similar to that noted in previous plates.'

In December the child had broncho-pneumonia.

At Eighteen Months (April, 1946)

(3 years 3 months)

Height and Weight. 36 inches (increase of 2 inches). 31 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 26 d. 'The plate when compared with that taken in October, last, shows that the chest formation has improved considerably. The hilar shadows are still enlarged but not so much as was noted previously and well marked fibrous nodules are present in both of these regions. There is still a certain amount of peribronchial mottling in both lower halves, but generally speaking the lung tissue in both sides appears to be much clearer than was noted in the last plate.'

At Two Years (October, 1946)

(3 years 9 months)

Height and Weight. 38 inches (increase of 2 inches). 34 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

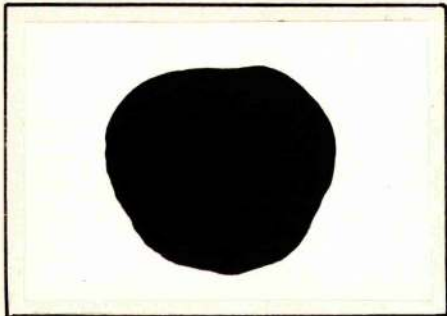
Radiographic Findings

Plate 26 e. 'The findings are very similar to those noted in October, 1944 and April, 1946. The hilar shadows are slightly enlarged. Both lungs show increased mottling and this becomes coarser in character in the lower halves.'

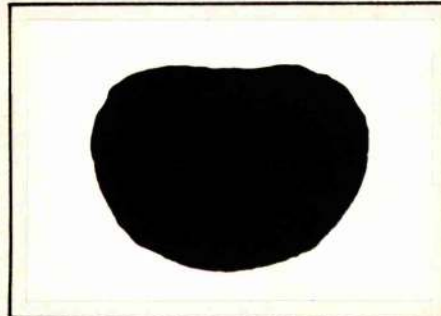
Lateral view shows some enlargement of the hilar shadows. Fibrous nodules are present in the region of the bifurcation of the main bronchus.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 26.At First Examination

A-P. diameter 5.00 inches. L. diameter 5.50 inches.

Fig. 26 a.At Two Years

A-P. diameter 5.00 inches. L. diameter 6.50 inches.

Circumference of Chest During Quiet Respiration

19.00 inches.

20.50 inches.

(Female. 1 year 9 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Vest	Wool	Knickers	Cotton
Knickers	Cotton		

Shoes and socks.

Shoes and no socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Frock	Velvet	Frock	Cotton
Jersey	Wool		
Coat	Tweed		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

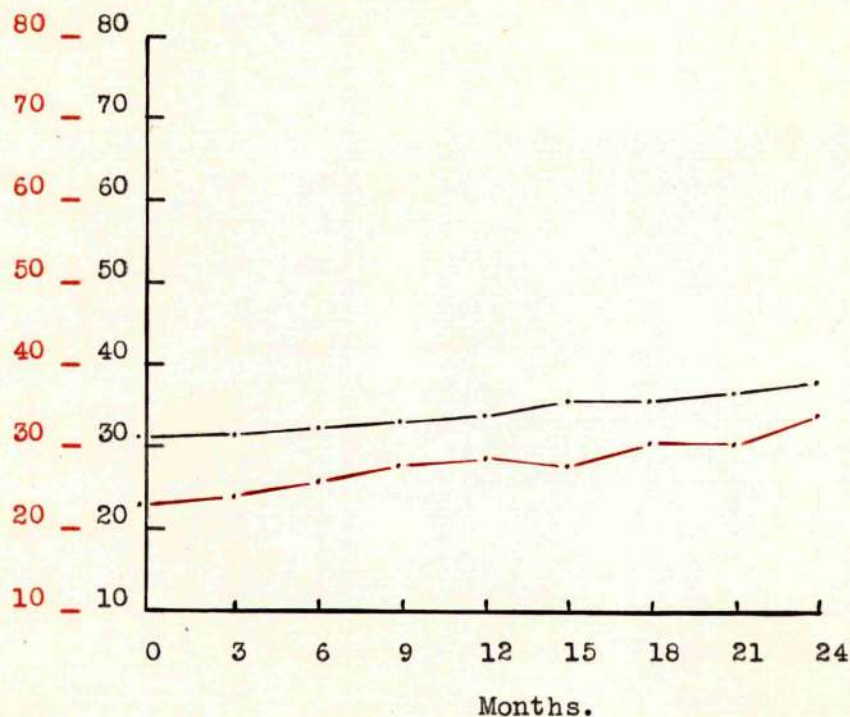
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



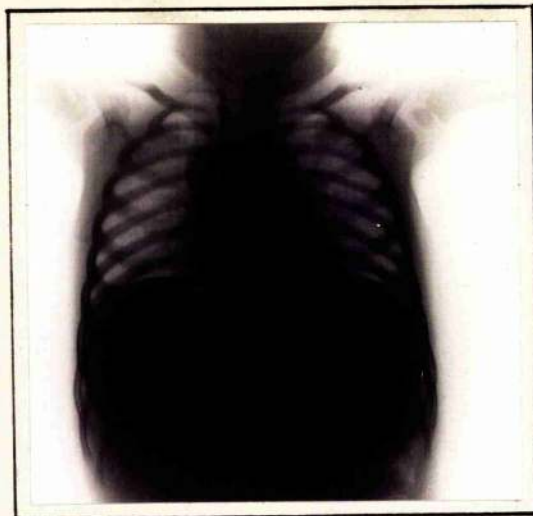


Plate 26. At First Examination.

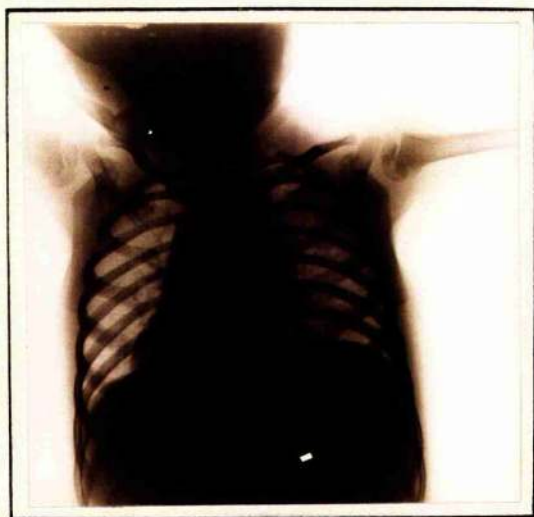


Plate 26 a. At Three Months.

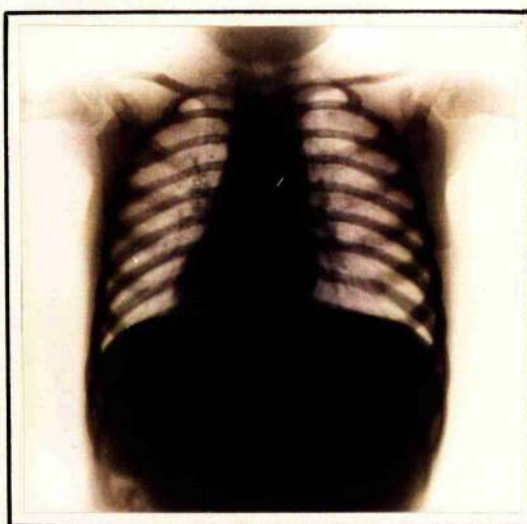


Plate 26 b. At Six Months.

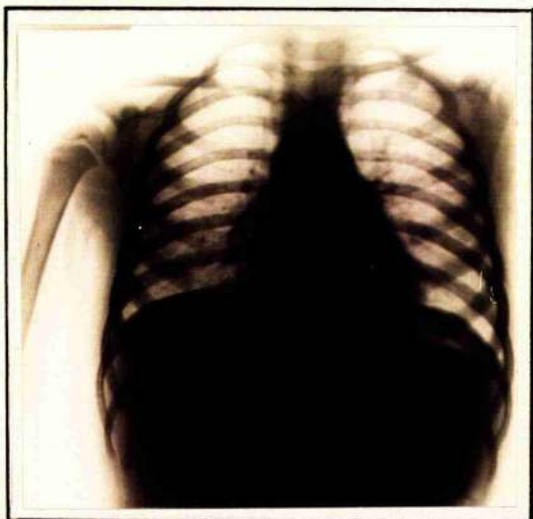


Plate 26 c. At One Year.

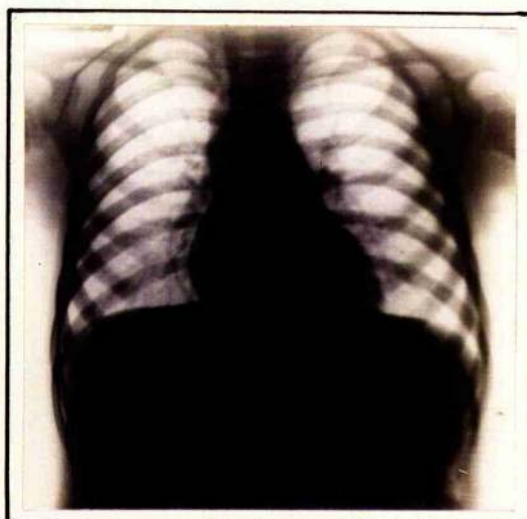


Plate 26 d. At Eighteen Months.

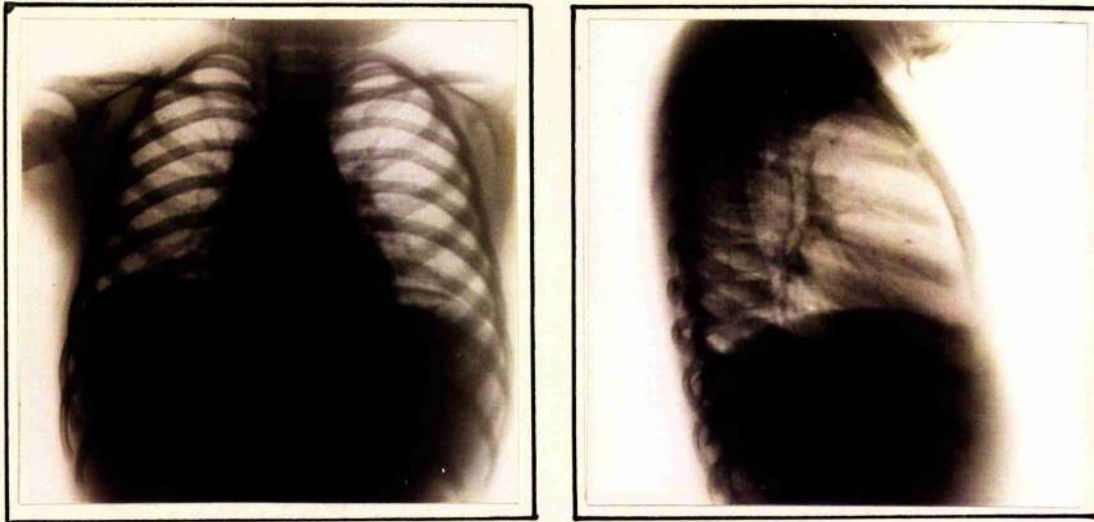


Plate 26 e. At Two Years.

Name. J.B. Sex. Male. Age. 5 years 7 months.

Date of Birth. 3/3/39.

Feeding. At breast for three months and thereafter fed on cow's milk (not boiled) as mother developed mastitis.

Family History. Parents are alive and well. Two brothers aged seven and four years have whooping cough (cases 28 and 29). One sister aged one year nine months has whooping cough (case 26). No family history of tuberculosis.

Previous Illnesses

Measles February, 1943.

Whooping cough September, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the country. The windows are kept open at night. The child lacks care and attention.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(5 years 7 months)

Height and Weight. 41.25 inches. 38 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, staphylococci, Gram-negative bacilli and streptococci including haemolytic strains.

Haematology.

Erythrocytes 4,540,000 per c.mm.
Leucocytes 12,577 per c.mm.
Haemoglobin 85 per cent. Colour Index 0.95

Differential Leucocyte Count:-

Neutrophils 36.50 per cent. (4,590 per c.mm.)
Eosinophils 13.00 per cent. (1,635 per c.mm.)
Basophils 0.75 per cent. (94 per c.mm.)
Lymphocytes 42.75 per cent. (5,376 per c.mm.)
Monocytes 7.00 per cent. (880 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	23	41	33	3	0

Physical Examination of Chest. Muscular development moderate. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 22.5 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 8 inches. Skin texture fine. Slight enlargement of anterior superficial veins over upper part of right side of chest. No enlarged glands.

Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. Cough and an occasional whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 27. 'Moderately well formed chest. Heart shadow central.

The hilar shadows are enlarged, this enlargement being moderately well noted on the right side where numerous fibrous nodules are associated with the hilar shadow. Relatively coarse mottling is noted extending from the hilar regions downwards into the bases on both sides, though this finding is much more obvious in the right side than in the left. There is a certain increase in fine mottling in both infraclavicular regions.

Lateral views confirm those findings and show enlargement of the hilar shadows and the presence of several fibrous nodules in these regions.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(5 years 10 months)

Height and Weight. 41.5 inches (increase of 0.25 inch).
39 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. Cough still persists.

Radiographic Findings

Plate 27 a. 'The hilar shadows are both enlarged and definite evidences of calcification are present in these regions, especially on the right side. Catarrhal changes are present in both lower halves, more marked on the right side. Lateral views confirm these findings.

Comparison with the plates taken in October last shows a definite clearing up of the chest condition. This is most marked by a diminution in the size of the hilar shadows, in an increase in the development of calcification in these regions and in a lessening of the catarrhal changes present in the lower halves.'

At Six Months (April, 1945)

(6 years 1 month)

Height and Weight. 42.25 inches (increase of 0.75 inch).
38.5 pounds (loss of 0.5 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. Slight interscapular dullness. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second

dorsal spine. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 27 b. 'The hilar shadows are only slightly enlarged. A certain amount of increased mottling extends from them upwards, outwards and downwards into the lung substance on each side. The findings are similar to those previously noted though the hilar shadows show a definite though slight decrease in each of the successive plates. The present plate still shows catarrhal changes in the lower halves, but are less well marked than were noted in October, 1944.

Lateral views confirm these findings and indicate a decrease in size of the hilar shadows and also a possible increase in the degree of fibrosis present in these regions.'

At One Year (October, 1945)

(6 years 7 months)

Height and Weight. 43.5 inches (increase of 1.25 inches).
42 pounds (gain of 3.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 27 c. 'Compared with plates taken in April, 1945 and October, 1944, the findings are similar to those noted previously. The hilar shadows are still somewhat enlarged and both lungs show a certain increase in moderate lung mottling in both lower halves. When compared with the previous plates it is noted that there has been a progressive diminution in the size of the hilar shadows and also a definite clearing up of the increased mottling noted in the lower halves. In the present plate the small fibrous nodules in the hilar regions are more clearly marked than were noted in the previous plates.

Lateral views all show similar findings and the diminution of the hilar shadows is not so apparent in these plates.'

In January the child had a cough for two weeks, especially after lying down in bed at night.

At Eighteen Months (April, 1946)

(7 years 1 month)

Height and Weight. 44.75 inches (increase of 1.25 inches).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 27 d. 'The findings are similar to those noted in October, last. The hilar shadows are more obvious in the present plate and certain very well marked calcified nodules are noted in these regions. There is a certain amount of increased mottling throughout both lungs and some increased peribronchial mottling is noted in both lower halves. The changes are all similar to those noted last October. Lateral views show similar findings and demonstrate very well the well fibrosed nodules in the hilar regions.'

At Two Years (October, 1946)

(7 years 7 months)

Height and Weight. 46 inches (increase of 1.25 inches).
45 pounds (no gain).

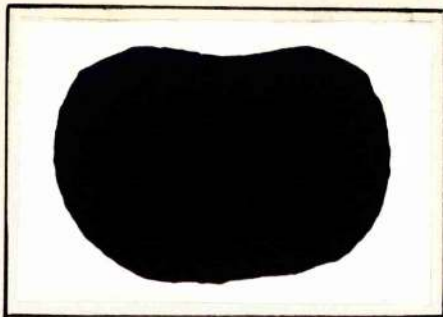
Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

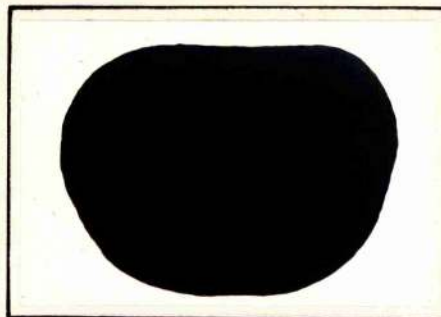
Radiographic Findings

Plate 27 e. 'Both hilar shadows are somewhat enlarged and there is a certain amount of increased mottling throughout both lungs. Some increased peribronchial mottling is noted in both lower halves. The findings are similar to those noted in October, 1944 and April, 1946, though actually the amount of mottling in the lung tissue at the present time is rather less than that noted on previous occasions. Lateral views show an enlargement of the hilar shadow with evidences of considerable fibrosis in this region. These fibrotic changes are more marked in the present plate than in any of the previous ones and actually the degree of enlargement of the hilar shadow is less marked at the present time than at any previous occasion.'

(one quarter natural size)

Fig. 27.At First Examination

A-P. diameter 5.50 inches.
L. diameter 8.00 inches.

Fig. 27 a.At Two Years

A-P. diameter 6.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

22.50 inches.

23.50 inches.

(Male. 5 years 7 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Vest	Wool		

Boots and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Pullover	Wool
Jersey	Wool	Trousers	Flannel
Trousers	Tweed		
Coat	Tweed		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

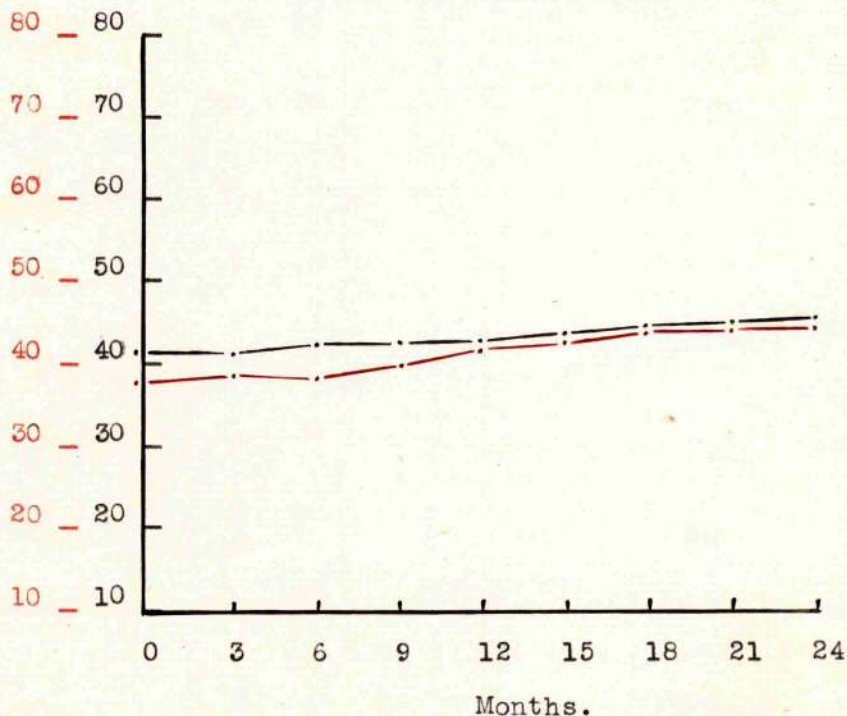
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



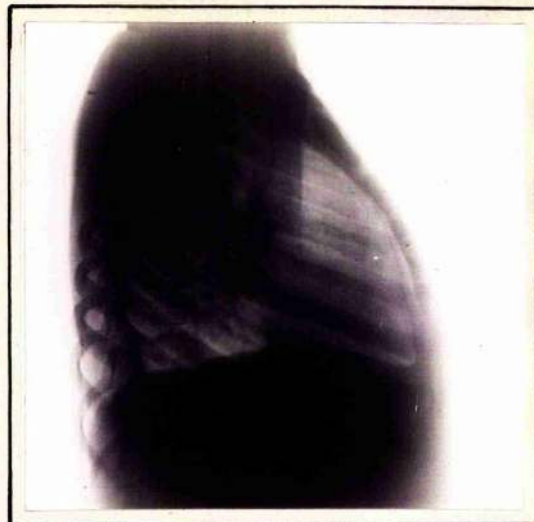
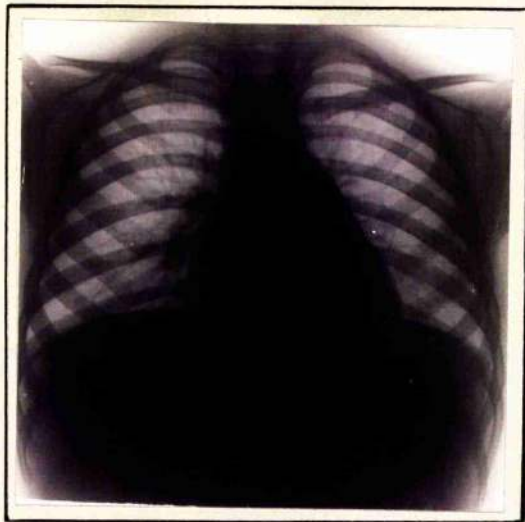


Plate 27. At First Examination.

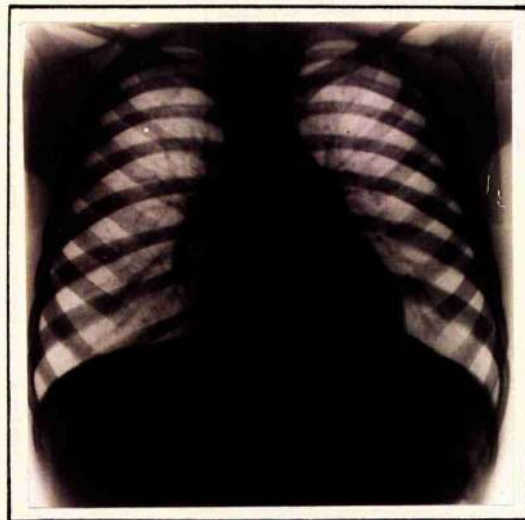


Plate 27 a. At Three Months.

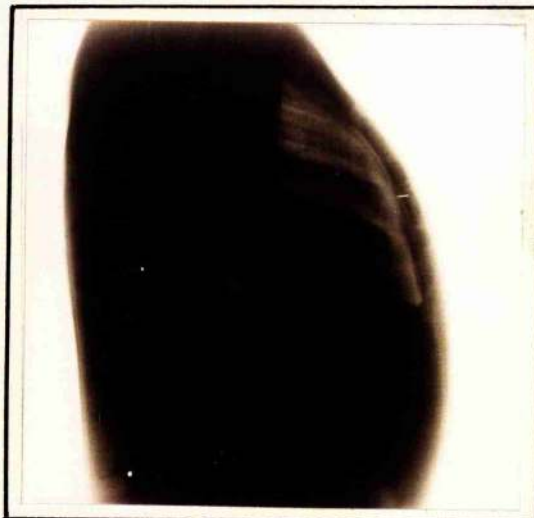
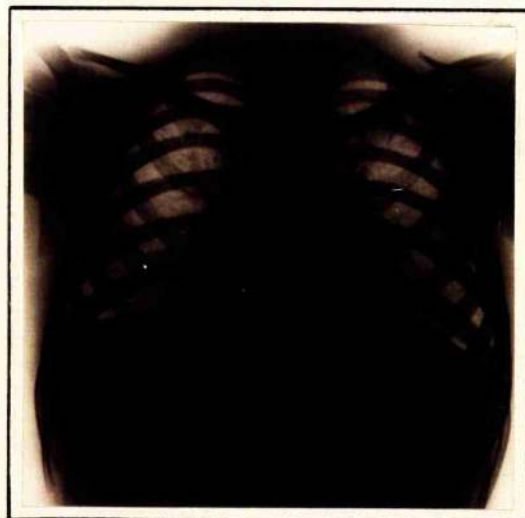


Plate 27 b. At Six Months.

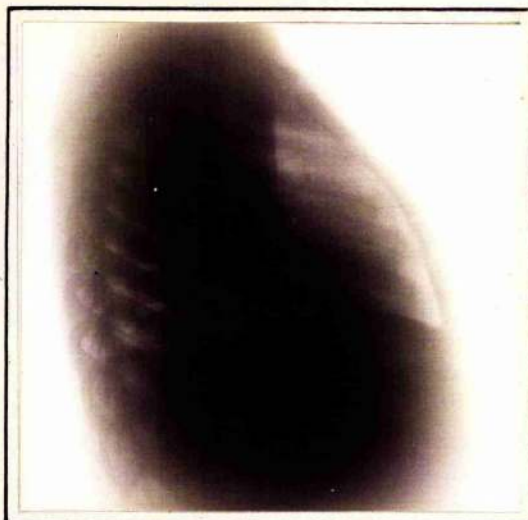


Plate 27 c. At One Year.

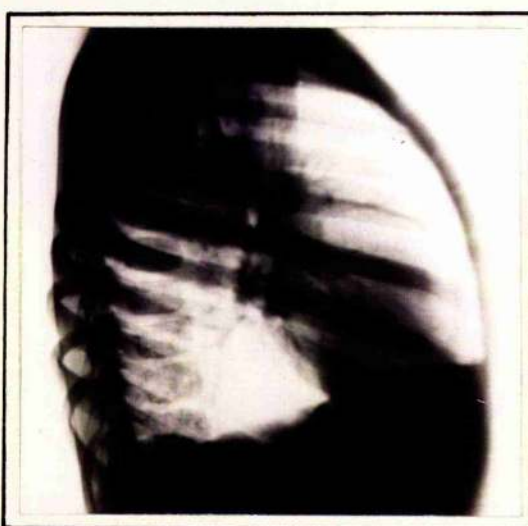
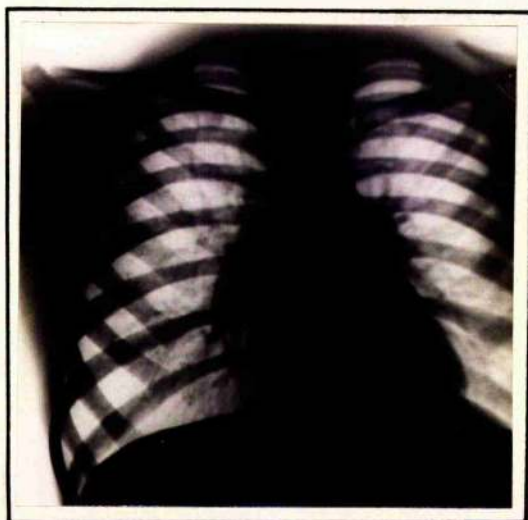


Plate 27 d. At Eighteen Months.

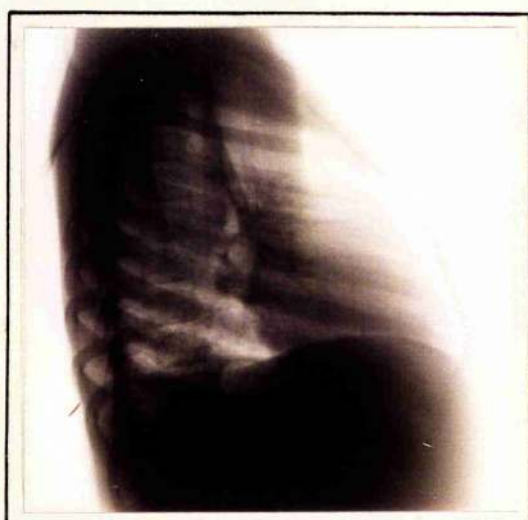
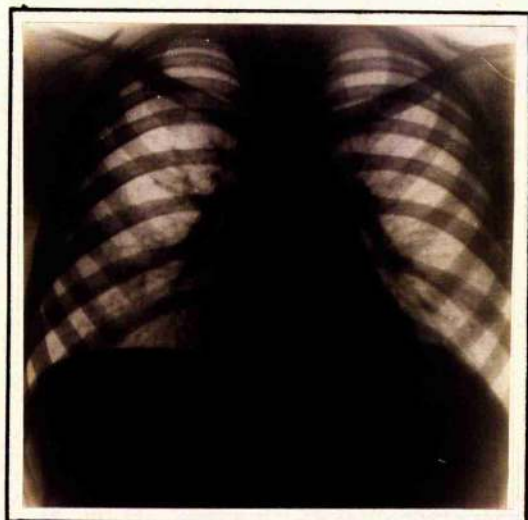


Plate 27 e. At Two Years.

Name. W.B. Sex. Male. Age. 4 years.

Date of Birth. 14/10/40.

Feeding. At breast for three weeks and thereafter fed on cow's milk (not boiled) as mother developed mastitis.

Family History. Parents are alive and well. Two brothers aged seven and five years and seven months have whooping cough (cases 27 and 29). One sister aged one year nine months has whooping cough (case 26). No family history of tuberculosis.

Previous Illnesses

Measles February, 1943.
Whooping cough September, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the country. The windows are kept open at night. The child lacks care and attention.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(4 years)

Height and Weight. 36.75 inches. 33 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, pneumococci and staphylococci (*aureus*).

Haematology.

Erythrocytes 4,390,000 per c.mm.
Leucocytes 9,466 per c.mm.
Haemoglobin 83 per cent. Colour Index 0.96

Differential Leucocyte Count:-

Neutrophils 40.00 per cent. (3,786 per c.mm.)
Eosinophils 8.50 per cent. (805 per c.mm.)
Basophils 0.25 per cent. (23 per c.mm.)
Lymphocytes 42.50 per cent. (4,023 per c.mm.)
Monocytes 8.75 per cent. (827 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	10	37	49	4	0

Physical Examination of Chest. Muscular development moderate. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of the anterior superficial veins over upper part of chest extending towards both shoulders. No enlarged glands. Percussion note clear. Breath sounds vesic-

ular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. An occasional cough and whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 28. 'A rather short, though well formed chest. The heart shadow is central.

The hilar shadows are both slightly enlarged and a certain amount of moderately fine mottling extends from them downwards into the bases on both sides. Both upper halves are relatively clear.

Lateral views confirm these findings and show an only moderate degree of hilar enlargement.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(4 years 3 months)

Height and Weight. 37.5 inches (increase of 0.75 inch).
34 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of chest still prominent. Slight dullness over upper part of sternum extending towards right clavicle. Breath sounds vesicular and harsh with scattered rhonchi, especially on right side of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was present. An occasional cough, especially after running and after lying down in bed at night.

Radiographic Findings

Plate 28 a. 'Both hilar shadows are considerably enlarged and relatively widespread fine mottling is noted extending from these regions throughout the lung tissue on both sides. The mottling becomes coarser in character and is more obvious in the lower halves.

The radiological findings are similar to those noted in October last, and show a slight enlargement in the size of the of the hilar shadows. The mottling in the lower halves is also slightly coarser than was noted in October last.

Lateral views also confirm this slight increase in the size of the hilar shadows.'

At Six Months (April, 1945)

(4 years 6 months)

Height and Weight. 38 inches (increase of 0.5 inch).
35 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of chest still prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 28 b. 'Both hilar shadows are definitely enlarged and there is evidence of fibrous nodules and commencing calcification in these regions. Both lower halves show an increase in moderately coarse mottling.

When compared with the film taken in January last, there is no doubt that the present findings are more favourable. The hilar shadows are smaller in size and the present plate shows evidence of fibrosis and even calcification. The mottling in the lungs in the present plate is also less well marked than was present in January, last. The present findings are similar to those noted in October, 1944, though the degree of healing in the hilar shadows is definitely much more obvious than in October, 1944.

Lateral views confirm these findings and demonstrate the increased fibrosis in the hilar regions.'

At One Year (October, 1945)

(5 years)

Height and Weight. 39 inches (increase of 1 inch).
37 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 28 c. 'Compared with plates taken in November, 1944 and April, 1945, the present plate shows a definite increase in the size of the chest. The findings in all three plates are somewhat similar though in the present plate there would appear to be a diminution in the size of the hilar shadows and in the amount of mottling noted in the lung tissue. The diminution in the hilar shadows is noted in both sides but is more apparent in the right side. In the previous plates a considerable amount of coarse mottling was present in the lower halves. This has now cleared up to a considerable extent.

Lateral views confirm these findings, showing in particular the diminution in size of the hilar shadows.'

In January the child had a cough for two weeks, especially after lying down in bed at night.

At Eighteen Months (April, 1946)

(5 years 6 months)

Height and Weight: 40 inches (increase of 1 inch).
40 pounds (gain of 3 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 28 d. 'The findings are similar to those noted in October last. There is a certain amount of fine mottling in both lungs but this is less marked at the present time than at last October. Furthermore, the hilar shadows seem more compact in type and there is evidence of a much better development in fibrosis in these regions. Lateral view shows somewhat similar findings and shows definite fibrosis in the hilar regions.'

At Two Years (October, 1946)

(6 years)

Height and Weight. 41.5 inches (increase of 1.5 inch).
42 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

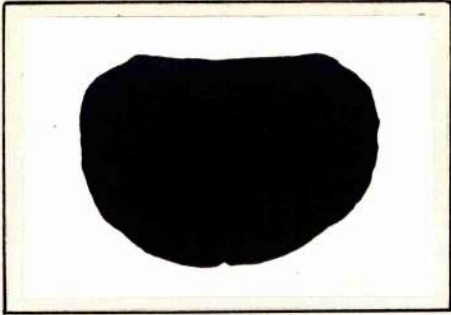
The child has had a cough for the past two weeks, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

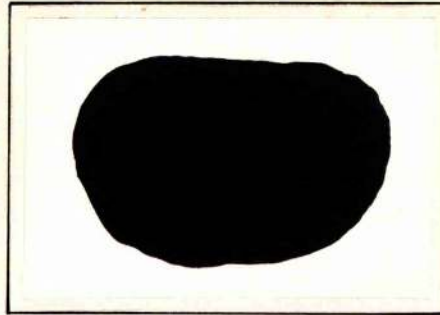
Radiographic Findings

Plate 28 e. 'Both hilar shadows are enlarged and there are several fibrous nodules in these regions. Both lungs show an increase in moderate mottling while some increased peribronchial mottling is present in the lower halves. There is no pleurisy at either base and both apices are clear. The findings are similar to those noted in October, 1944 and April, 1946. At the present moment the hilar shadows are larger and the mottling in the lower half of a rather coarse nature. Numerous fibrous and even calcified nodules are noted in the hilar regions. In the present plate the hilar shadows are better defined than in the previous plates.'

(one quarter natural size)

Fig. 28.At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Fig. 28 a.At Two Years.

A-P. diameter 5.00 inches.
L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

20.50 inches.

22.50 inches.

(Male. 4 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Vest	Wool		

Boots and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Pullover	Wool
Jersey	Wool	Trousers	Flannel
Trousers	Tweed		
Coat	Tweed		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

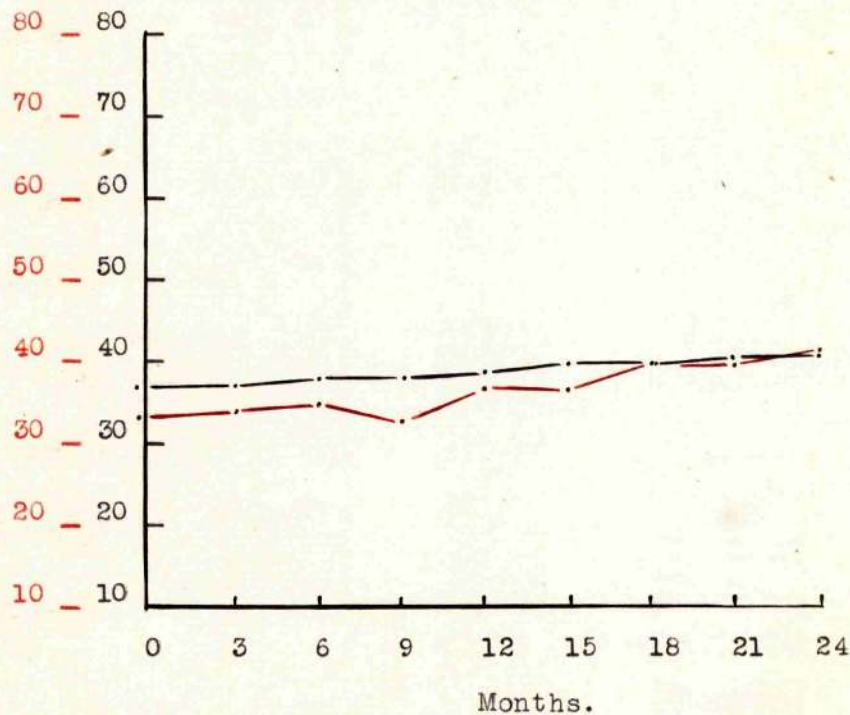
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



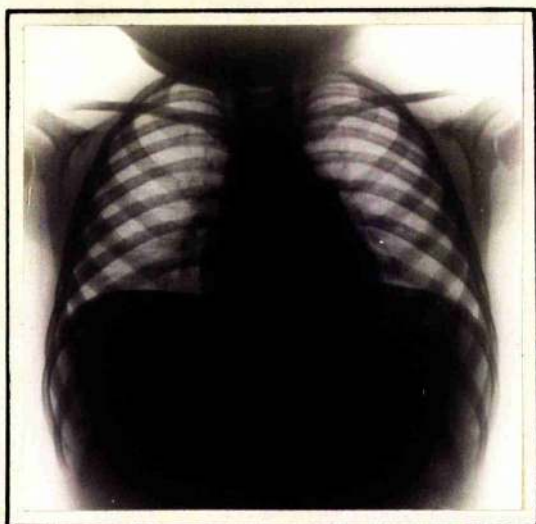


Plate 28. At First Examination.

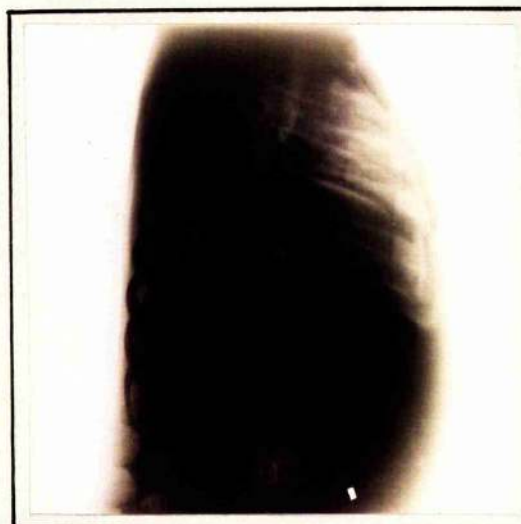
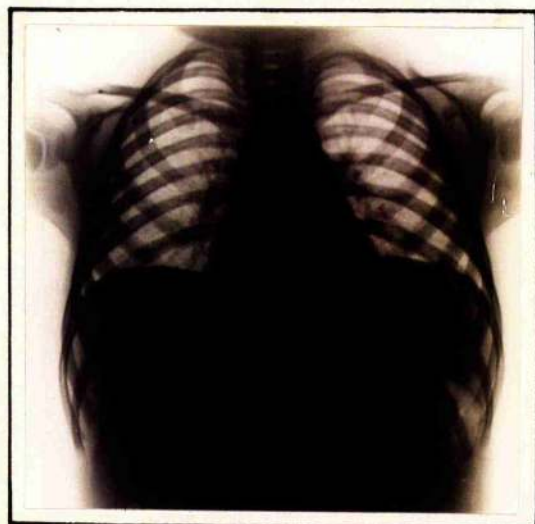


Plate 28 a. At Three Months.

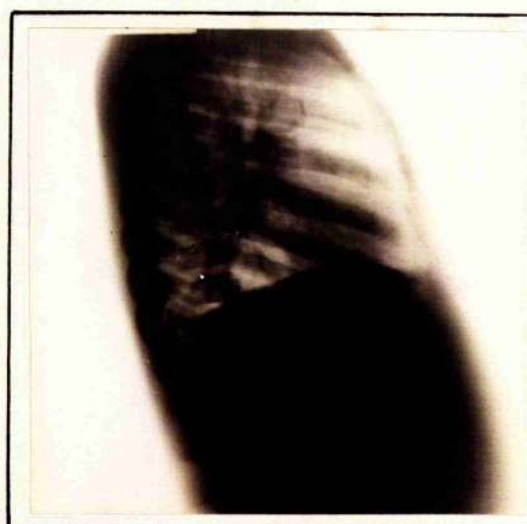
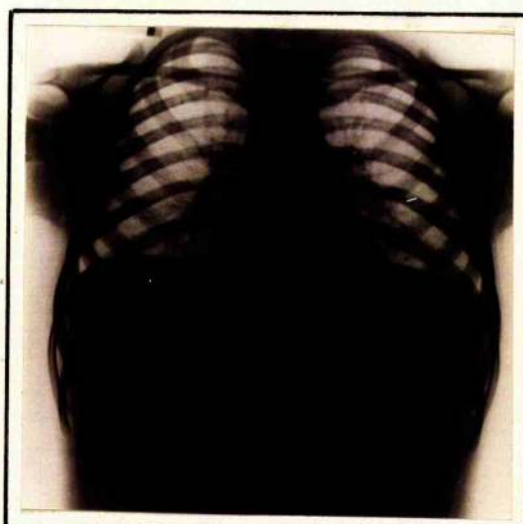


Plate 28 b. At Six Months.

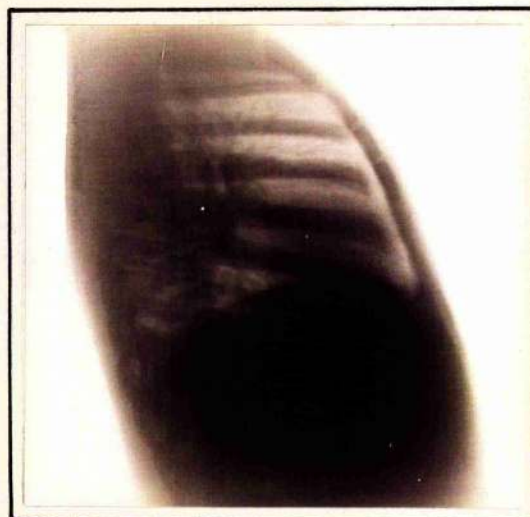
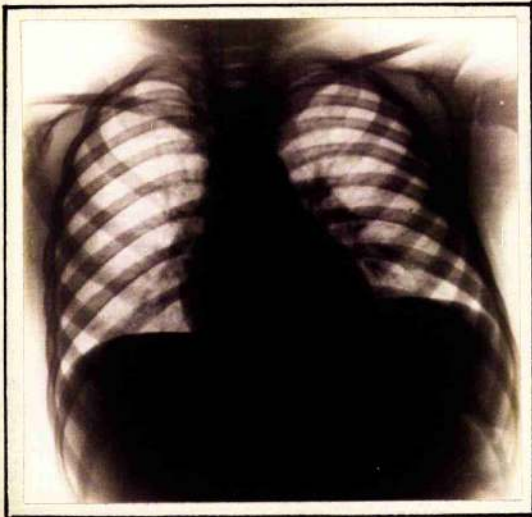


Plate 28 c. At One Year.

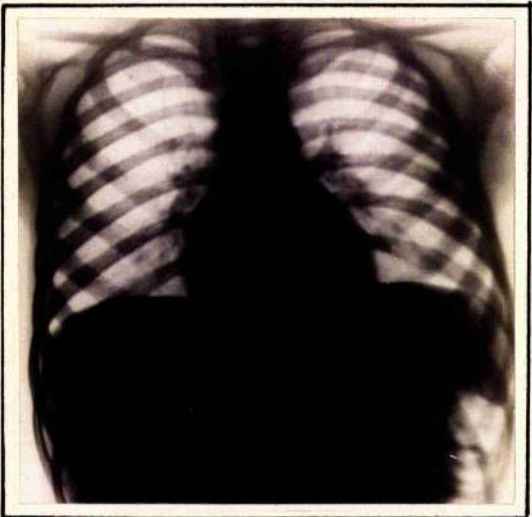


Plate 28 d. At Eighteen Months.

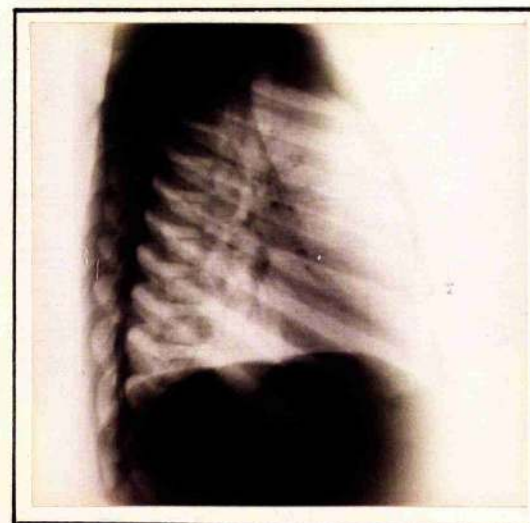
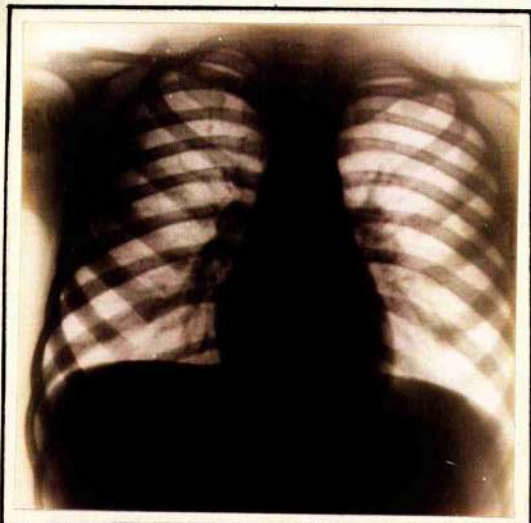


Plate 28 e. At Two Years.

Name. J.B. Sex. Male. Age. 6 years 8 months.

Date of Birth. 12/2/38.

Feeding. At breast for nine months.

Family History. Parents are alive and well. Two brothers aged four and five years seven months have whooping cough (cases 27 and 28). One sister aged one year nine months has whooping cough (case 26). No family history of tuberculosis.

Previous Illnesses

Mumps	September, 1942.
Measles	February, 1943.
Whooping cough	September, 1944.

Environment and Parental Care. The family resides in a room and kitchen in the country. The windows are kept open at night. The child lacks care and attention.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(6 years 8 months)

Height and Weight. 44.5 inches. 47 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw:	654321	123456
Teeth in lower jaw:	654321	123456
Total number of teeth:	24	

Ear, Nose and Throat. Ears healthy. Discharging nose. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, streptococci, staphylococci and pneumococci.

Haematology.

Erythrocytes	4,150,000 per c.mm.
Leucocytes	14,800 per c.mm.
Haemoglobin	82 per cent. Colour Index 1.0

Differential Leucocyte Count:-

Neutrophils	46.75 per cent. (6,919 per c.mm.)
Eosinophils	4.50 per cent. (666 per c.mm.)
Basophils	1.50 per cent. (222 per c.mm.)
Lymphocytes	40.25 per cent. (5,957 per c.mm.)
Monocytes	6.00 per cent. (888 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	16	41	39	4	0

Physical Examination of Chest. Muscular development moderate. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 23 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 8 inches. Skin texture coarse. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note slightly impaired over upper half of right lung. Breath sounds diminished over right

side and more so over right lower half posteriorly. Rhonchi present in right lung and these were more apparent over the lower lobe. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. Cough and an occasional whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. Slight enlargement to left. Sounds regular and pure.

Radiographic Findings

Plate 29. 'A moderately well formed chest. The heart shadow is central, but shows considerable enlargement on the left side. The hilar shadows are enlarged and fibrous nodules are noted in these regions. Coarse mottling extends from the hilar regions downwards into the lower halves, but no evidence of any pleurisy is noted at either base. Both upper halves show an increase in moderately fine mottling.

Lateral views confirm these findings and show a considerable enlargement of the hilar shadows. The findings are those of a widespread degree of catarrhal involvement of both lungs.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(6 years 11 months)

Height and Weight. 44.75 inches (increase of 0.25 inch).
46 pounds (loss of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. A few scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially in the early morning and after running.'

Radiographic Findings

Plate 29 a. 'Both hilar shadows are enlarged and certain fibrous nodules are present in these regions. Catarrhal changes are present throughout both lungs and the mottling noted in the lungs becomes more obvious and more coarse in nature in the lower halves. No pleurisy is present at either base. The findings are those of a fairly widespread bronchial catarrh involving both lungs.

When compared with the plate taken in October last, there is evidence of considerable clearing in the findings noted in both lungs. The amount of mottling present is lessened, the hilar shadows are smaller, the development of fibrous nodules in these regions is more pronounced and the amount of coarse mottling in the bases is lessened.

Lateral views show a shrinking in the size of the hilar shadows.'

At Six Months (April, 1945)

(7 years 2 months)

Height and Weight. 45 inches (increase of 0.25 inch).
47 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 29 b. 'The plate shows enlargement of the hilar shadows this being much more obvious on the right side than on the left. Certain fibrous nodules are present in these regions. A fairly considerable amount of rather fine mottling extends outwards but principally downwards from the right hilar region into the adjacent lung tissue. Conditions in the left lung are relatively normal.'

When compared with the plate taken in October, 1944, the present plate shows a degree of clearing up, especially in the left lung. This improvement was noted in the plate taken in January 1945, and as far as the left lung is concerned the improvement has been continued. Conditions in the lower half of the right lung appear to have deteriorated since January last. The hilar shadow is greater in size and the extent of the mottling in the lung tissue is more extensive.

Lateral views confirm these findings, though there is a suggestion of increased fibrosis in the right hilar shadow.'

At One Year (October, 1945)

(7 years 8 months)

Height and Weight. 46 inches (increase of 1 inch).
49 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 29 c. 'Findings are very similar to that noted in April last, though when compared with the plate taken a year ago there is evidence that the hilar shadows are less well marked and the degree of mottling noted in the lung tissue is also lessened in amount. In the present plate the right hilar shadow shows some enlargement and a certain amount of moderately coarse mottling extends from it downwards into the base.'

Lateral views confirm these findings, showing in particular the decrease in size of the hilar shadow since October, 1944.'

The child had a cough during February and March, especially after lying down in bed at night.

At Eighteen Months (April, 1946)

(8 years 2 months)

Height and Weight. 47 inches (increase of 1 inch).
51 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was present. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 29 d. 'The findings are similar to those noted six months ago. In the present plate, however, the hilar shadows are definitely lessened in size, this being more obvious on the right side. Furthermore, the lungs in the present plate do not show as much increased mottling as was noted last October. At the present time the amount of coarse mottling present in the right cardio-phrenic sulcus is considerably lessened. Similarly the mottling in the left lung is less in amount. The changes noted in the lateral views are in agreement with these findings. Well marked fibrosis is noted in the hilar regions.'

At Two Years (October, 1946)

(8 years 8 months)

Height and Weight. 48 inches (increase of 1 inch).
54 pounds (gain of 3 pounds).

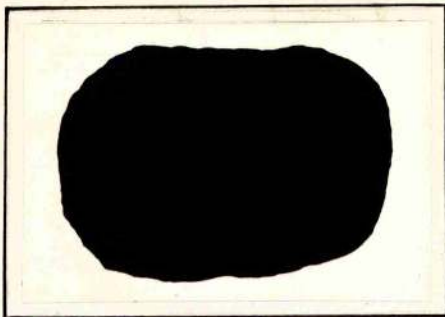
Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

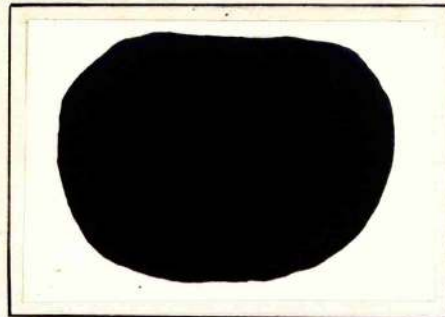
Radiographic Findings

Plate 29 e. 'The hilar shadows are still enlarged and certain fibrous nodules are present in the left hilar region. There is a certain amount of increased mottling in both lungs, particularly in the lower halves and this finding is more obvious in the right side. The findings are somewhat similar to those noted in October, 1944 and April, 1946, though actually in the present plate the hilar shadows are rather more definite in outline, the fibrous nodules are somewhat more marked and the upper portions of the lung tissue are clearer. There is still, however, evidence of considerable catarrhal change in both lungs. Lateral views show a definite enlargement of the hilar shadow and numerous fibrous nodules in this region. When compared with the lateral views taken in October, 1944 and April, 1946, the present plate shows that the hilar shadow is definitely much more discrete and the fibrous nodules are much better defined. The lateral view shows that an improvement has taken place.'

(one quarter natural size)

Fig. 29.At First Examination

A-P. diameter 5.50 inches.
L. diameter 8.00 inches.

Fig. 29 a.At Two Years

A-P. diameter 6.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

23 inches.

25 inches.

(Male. 6 years 8 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Vest	Wool		
Boots and stockings.		Boots and stockings.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Jersey	Wool	Trousers	Flannel
Trousers	Tweed	Jacket	Flannel
Jacket	Tweed		
Coat	Tweed		
No cap.		No cap.	

Overclothed:

No.

Constriction of chest due to clothing:

None.

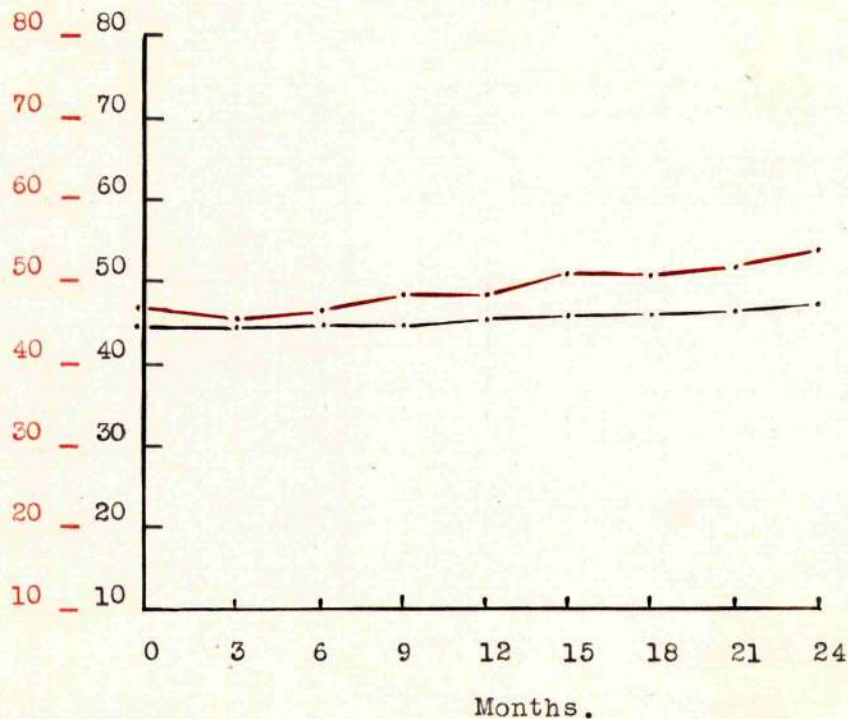
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



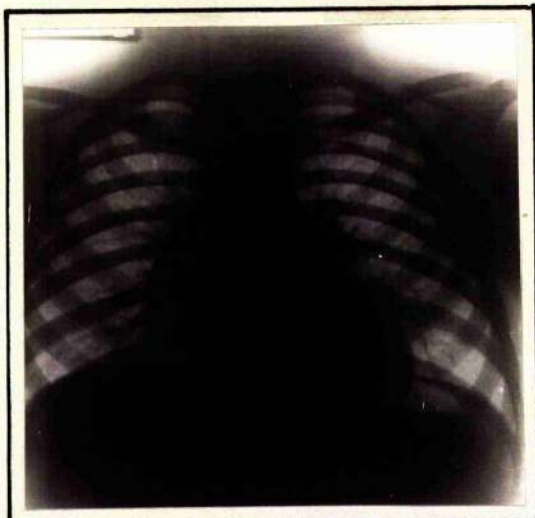


Plate 29. At First Examination.

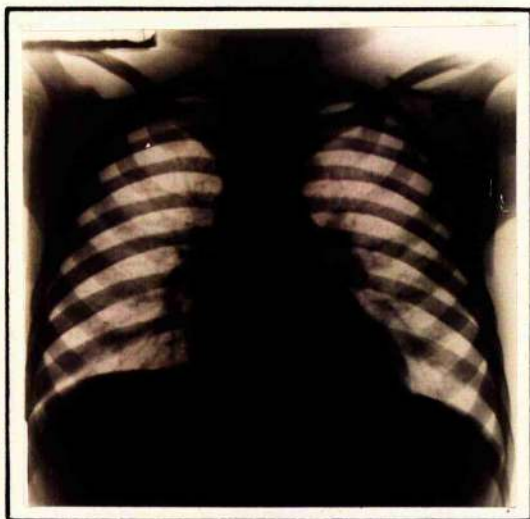


Plate 29 a. At Three Months.

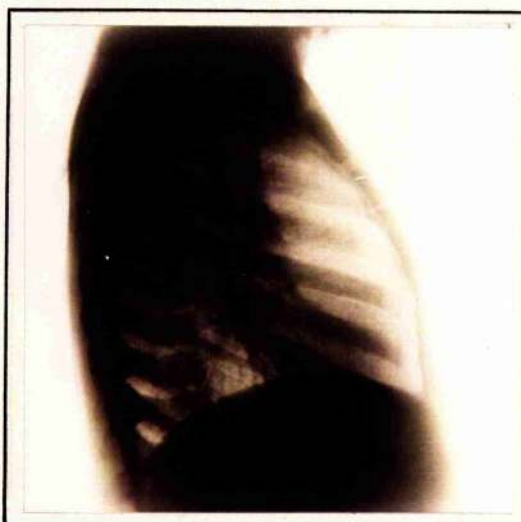
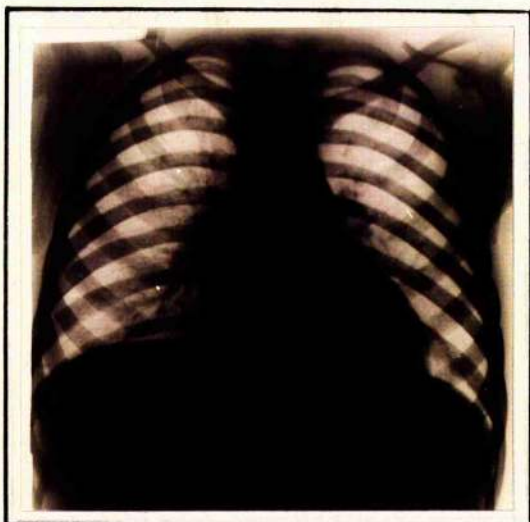


Plate 29 b. At Six Months.

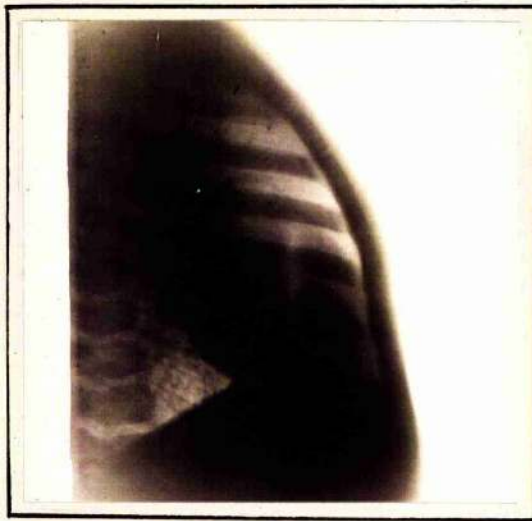
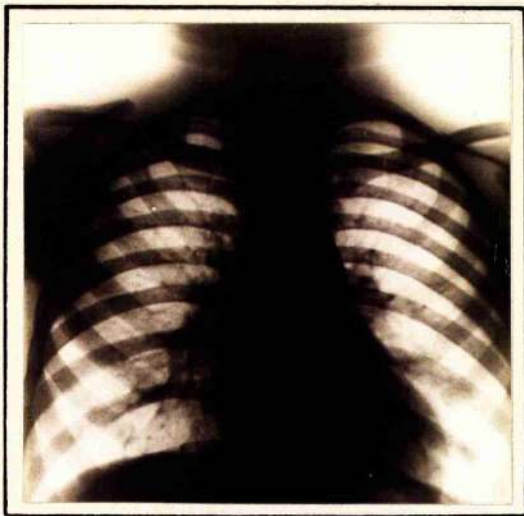


Plate 29 c. At One Year.

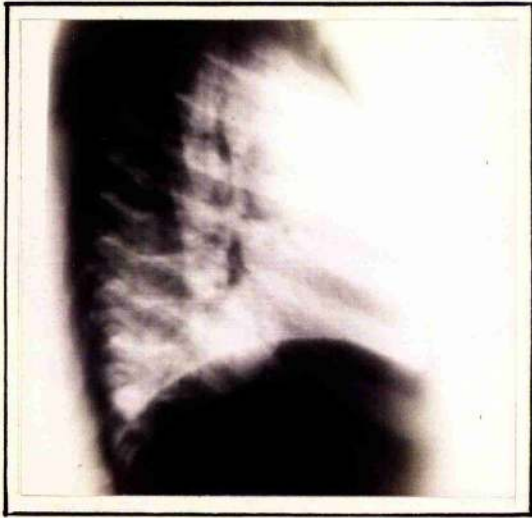
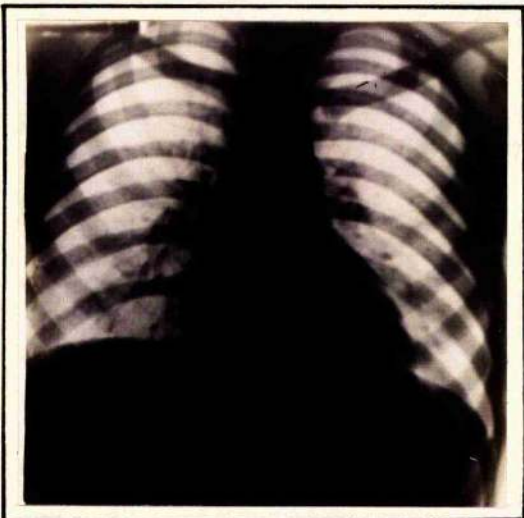


Plate 29 d. At Eighteen Months.

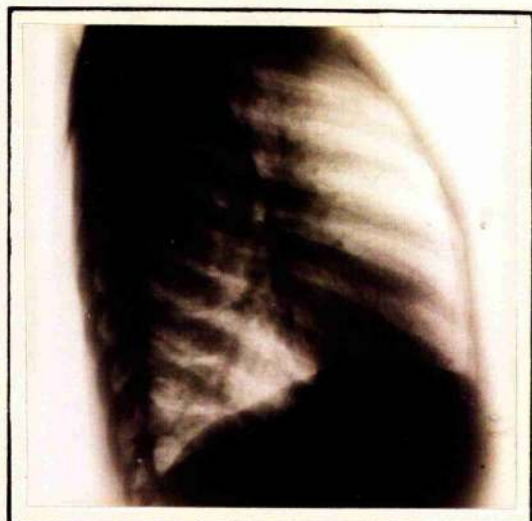
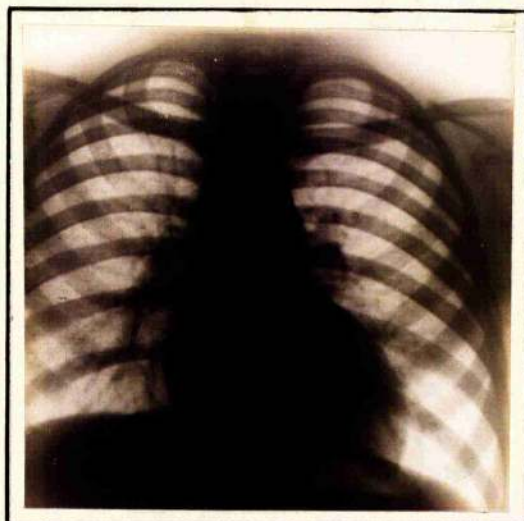


Plate 29 e. At Two Years.

Name. J.McI. Sex. Male. Age. 2 years 9 months.

Date of Birth. 10/2/42.

Feeding. At breast for two weeks and thereafter fed on cow's milk (boiled) when lactation stopped.

Family History. Parents are alive and well. Only child.
No Family history of tuberculosis.

Previous Illnesses

Previous health good.
Whooping cough September, 1944.

Environment and Parental Care. The family resides in a one apartment tenement house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

November, 1944.

(2 years 9 months)

Height and Weight. 33.25 inches. 30 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge.
Tonsils and adenoids not enlarged.

Nase-faucial Flora. Mainly M.catarrhalis, staphylococci and streptococci.

Haematology.

Erythrocytes 4,340,000 per c.mm.
Leucocytes 12,400 per c.mm.
Haemoglobin 75 per cent. Colour Index 0.88.

Differential Leucocyte Count:-

Neutrophils 45.25 per cent. (5,611 per c.mm.)
Eosinophils 5.75 per cent. (712 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 48.00 per cent. (5,952 per c.mm.)
Monocytes 1.00 per cent. (124 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	10	28	52	9	1

Physical Examination of Chest. Muscular development good. Scapulae normal. Scoliosis of lower cervical and upper thoracic regions of spine. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5 inches. Lateral diameter 6 inches. Skin texture fine. Slight enlargement of anterior superficial veins over upper part of chest. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's

sign was absent. Cough and occasional whoop.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 30. 'Lateral curvature of lower and upper dorsal vertebrae. The upper half convex to right, lower convex to left, with consequent asymmetry of chest, the right apex being higher than the left; the right ribs run angled and closer together. There is also undue prominence of right border of mediastinal shadow. There is slight enlargement of the left root shadow with some upper bronchial and bronchial glands showing. One gland is showing along right lower lobe bronchi.'

SUBSEQUENT EXAMINATIONS

At Three Months (February, 1945)

(3 years)

Height and Weight. 34 inches (increase of 0.75 inch).
31 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially in the early morning.

Radiographic Findings

Plate 30 a. 'The amount of root shadow shows little change. The right basal bronchial glands and the left upper bronchial glands are slightly smaller in size and much more defined in outline.'

At Six Months (May, 1945)

(3 years 3 months)

Height and Weight. 34 inches (no increase). 31 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. Cough, especially in the early morning.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 30 b. 'Scattered areas of congestion over both lung fields. Upper bronchial glands (left) show some further enlargement.'

During September and October the child had a cough, especially in the early morning.

At One Year (November, 1945)

(3 years 9 months)

Height and Weight. 36 inches (increase of 2 inches).
31 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer patch test (bovine) was negative. Vollmer (human) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 30 c. 'Generalised congestion has increased during the past year, but appears to have become more or less stationary during the past six months, except in the right mid and upper bronchial gland groups which are just beginning to take on a harder look.'

In January the child had a cough for two weeks, especially after lying down in bed at night.

At Eighteen Months (May, 1946)

(4 years 3 months)

Height and Weight. 36.75 inches (increase of 0.75 inch).
33 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 30 d. 'Compared with six months ago there is little change to be noted.'

In August the child had diphtheria.

At Two Years (November, 1946)

(4 years 9 months)

Height and Weight. 38.25 inches (increase of 1.50 inches).
35 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 30 e. 'As compared with six months ago there is no change in the antero-posterior film.

The present lateral view shows peribronchial congestion general throughout lung fields and no definite calcification of gland masses.

As compared with that of two years ago the present antero-posterior film shows root shadows equally diffuse and with but little improvement in the quality. Gland masses are still diffusely enlarged along the right basal and left upper lobe bronchi. Increased lung striation generally.'

CYRTOMETER TRACINGS

(one quarter natural size)

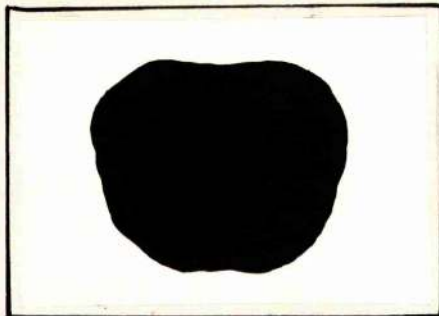


Fig. 30.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 6.00 inches.

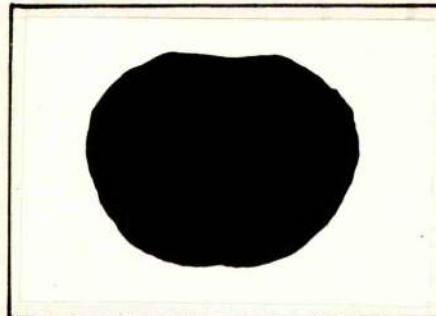


Fig. 30 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 6.50 inches.

Circumference of Chest During Quiet Respiration

20.00 inches.

20.75 inches.

(Male. 2 years 9 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Trousers	Velvet	Trousers	Flannel
Pullover	Wool		
Coat	Tweed		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

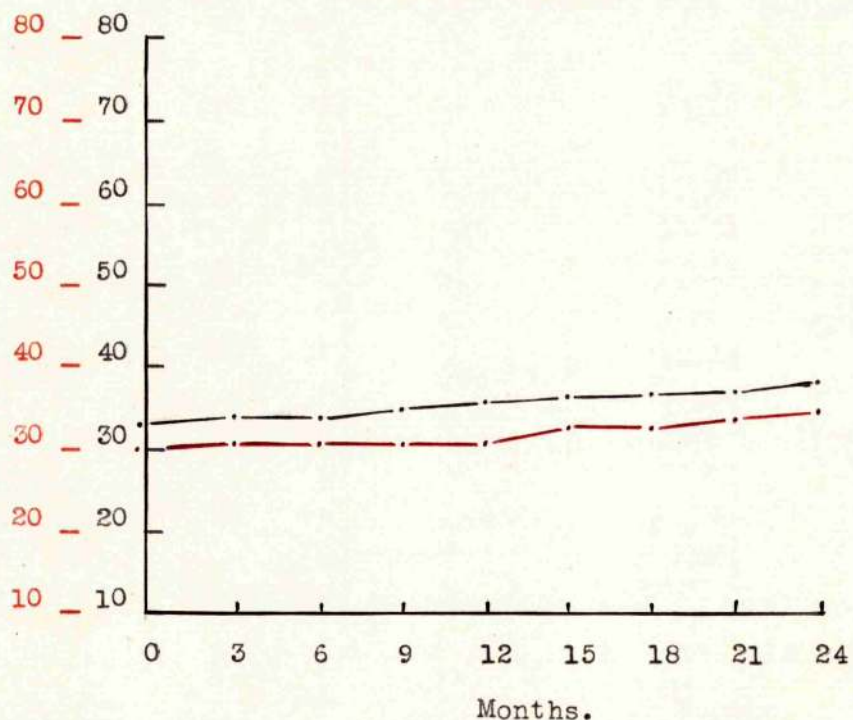
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



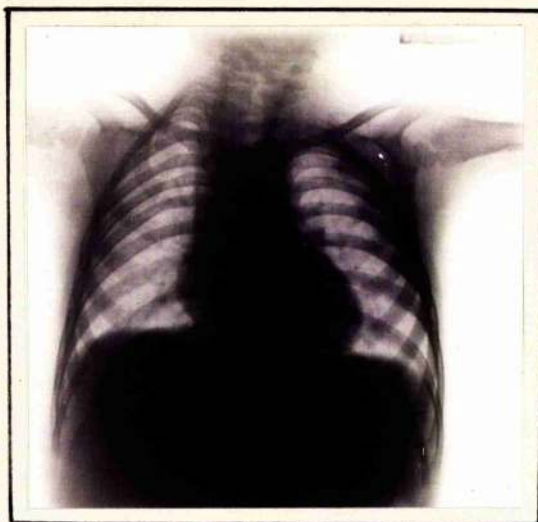


Plate 30. At First Examination.

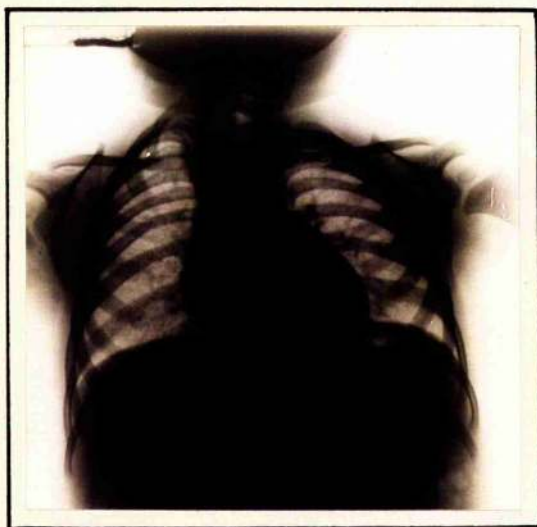


Plate 30 a. At Three Months.

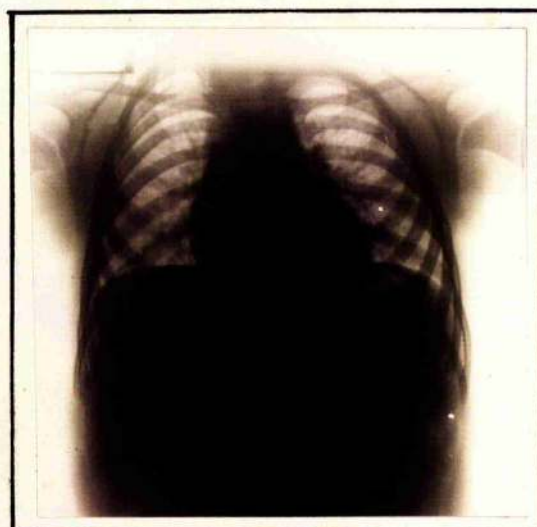


Plate 30 b. At Six Months.

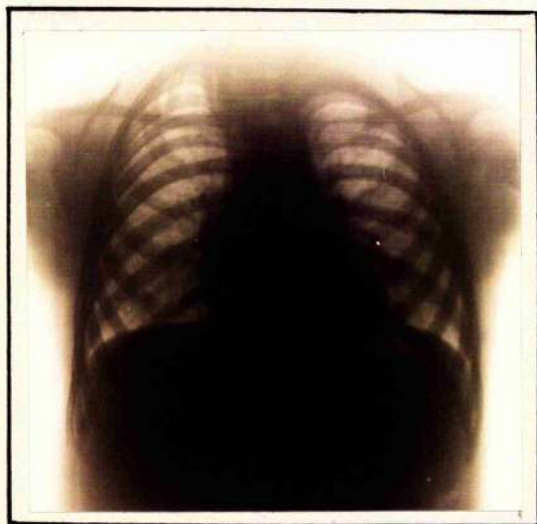


Plate 30 c. At One Year.

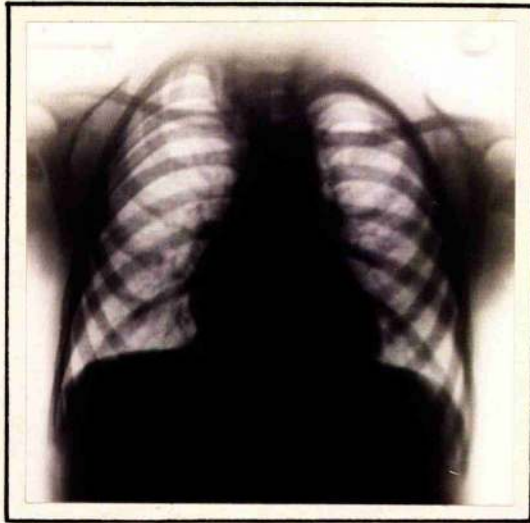


Plate 30 d. At Eighteen Months.

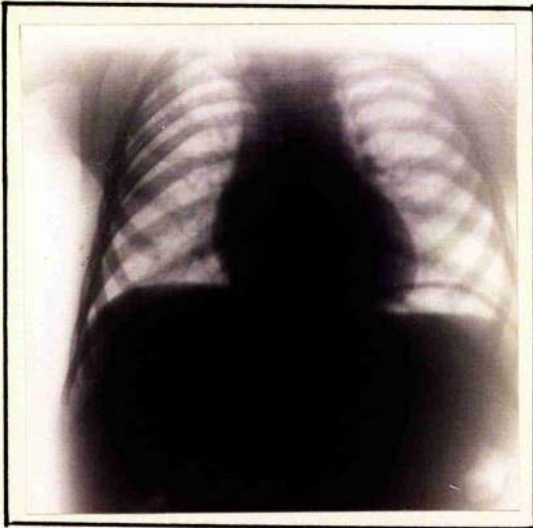


Plate 30 e. At Two Years.

Name. A.R. Sex. Female. Age. 6 years 6 months.

Date of Birth. 12/5/38.

Feeding. At breast for three weeks and thereafter fed on cow's milk (not boiled) as mother developed mastitis.

Family History. Mother alive and well. Illegitimate child. No family history of tuberculosis.

Previous Illnesses

Catarrhal jaundice July, 1944.
Whooping cough October, 1944.

Environment and Parental Care. The child resides with her mother and an aunt in a three apartment house in the country. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

November, 1944.

(6 years 6 months)

Height and Weight. 45.5 inches. 49 pounds.

Mouth and Teeth. Tongue moist and clean. Three decayed teeth in upper jaw (5 4 and 4). Remainder in good condition.

Teeth in upper jaw: 654321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 21

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci and streptococci.

Haematology.

Erythrocytes 5,330,000 per c.mm.
Leucocytes 15,355 per c.mm.
Haemoglobin 86 per cent. Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils 41.50 per cent. (6,372 per c.mm.)
Eosinophils 8.25 per cent. (1,266 per c.mm.)
Basophils 0.00 per cent. (0 per c.mm.)
Lymphocytes 45.00 per cent. (6,909 per c.mm.)
Monocytes 5.25 per cent. (806 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	10	33	51	5	1

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 22.5 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 7.5 inches. Skin texture fine. Slight enlargement of anterior superficial veins over upper part of chest extending towards right shoulder. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The

tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough and whoop.

Bacteriological Examination of Sputum. A mixed flora including pneumococci. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 31. 'Well formed chest. Heart shadow is central and normal. Both hilar shadows are considerably enlarged, this being more obvious on the right side than on the left. Several fibrous nodules are noted in the hilar regions. Both lungs show a considerable amount of moderately coarse mottling which radiates upwards, outwards but chiefly downwards into the lung substance on both sides. The mottling in the lower halves is of a more coarse and obvious nature than in the other portions of lung tissue. No pleurisy is present at either base.

Lateral views confirm these findings and show definite evidence of enlargement of the hilar shadows.'

SUBSEQUENT EXAMINATIONS.

At Three Months (February, 1945)

(6 years 9 months)

Height and Weight. 46 inches (increase of 0.5 inch).
52 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. Slight inter-scapular dullness. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. Cough, especially after running and lying down in bed at night.

Radiographic Findings

Plate 31 a. 'Both hilar shadows are increased in size. Both lungs show an increase in lung mottling, this finding becoming more obvious and somewhat more coarse in nature in the lower halves.

Compared with the findings noted in November, 1944, the appearances are very similar in both plates.

Lateral views confirm these findings. In the present plate the hilar shadows appear more clearly defined and slightly smaller in size than were noted in November, 1944.'

At Six Months (May, 1945)

(7 years)

Height and Weight. 46.75 inches (increase of 0.75 inch).
53 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. Slight inter-scapular dullness. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the

second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 31 b. 'Both hilar shadows show considerable enlargement. Definite evidence of fibrotic changes are noted in the gland of the right side, while the gland of the left side shows a more diffuse degree of enlargement. Both lungs show an increase in moderate lung mottling, this finding tending to spread upwards and downwards from the hilar regions. These findings are most marked in the right base and in the left upper half. Conditions in the lower half of the left lung are relatively clear.

When compared with the plates taken in November, 1944 and February, 1945 there is evidence of a degree of decrease in size of the right hilar shadow and the degree of fibrosis in this region is now more marked.

Lateral views also show a degree of clearing up since November, 1944.'

At One Year (November, 1945)

(7 years 6 months)

Height and Weight. 47.75 inches (increase of 1 inch).
56 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 31 c. 'Comparing the plates with those taken in November, 1944 and May, 1945, the radiological findings are somewhat similar. While the hilar shadows are still somewhat enlarged, the present plate shows that a definite decrease in size has taken place in each of the successive plates. Similarly the degree of mottling noted throughout both lungs has also cleared up considerably. There is still a certain amount of increased peribronchial mottling in the lower halves, more marked, perhaps, on the right side.

Lateral views confirm these findings and show particularly a diminution in the size of the hilar shadows and a decrease in the amount of mottling in the lung tissue.'

In January the child had a cough for three weeks, especially after lying down in bed at night.

At Eighteen Months (April, 1946)

(8 years)

Height and Weight. 48.75 inches (increase of 1 inch).
59 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no ab-

normality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 31 d. 'The hilar shadows in the present plate are rather more discrete than in the previous ones and show a greater degree of fibrosis. There is a certain amount of increased mottling throughout both lungs. Lateral view confirms these findings and shows that the hilar shadows are somewhat smaller in size and that the fibrosis in these regions is more marked.'

In August the child had scarlet fever.

At Two Years (November, 1946)

(8 years 6 months)

Height and Weight. 49.75 inches (increase of 1 inch). 68 pounds (gain of 4 pounds).

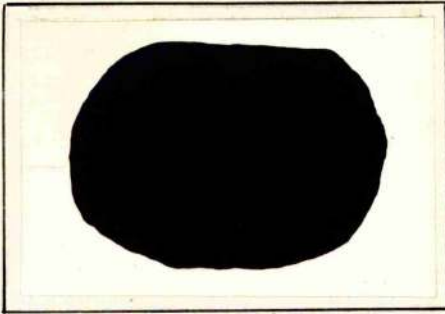
Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

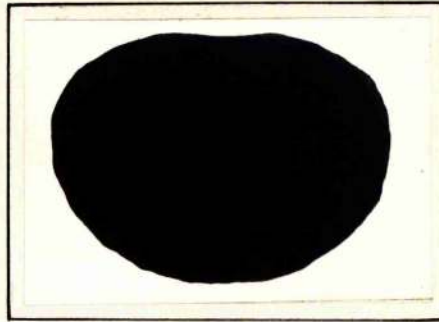
Radiographic Findings

Plate 31 e. 'The hilar shadows are enlarged but not so definitely so as was noted in her first plate. There is still an increase in mottling throughout both lungs and a little increased striation is present in the left infraclavicular region. Generally speaking, the plate findings are somewhat clearer than those noted on previous occasions. Similar findings are noted in the lateral views.'

(one quarter natural size)

Fig. 31.At First Examination

A-P. diameter 5.50 inches.
L. diameter 7.50 inches.

Fig. 31 aAt Two Years

A-P. diameter 6.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

22.50 inches.

23.50 inches.

(Female. 6 years 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Cotton	Bodice	Cotton
Knickers	Cotton	Knickers	Cotton
Shoes and socks.		Shoes and socks.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Frock	Cotton
Kilt	Wool		
Coat	Tweed		
Scarf	Wool		
Hat.		No hat.	

Overclothed:

Constriction of chest due to clothing:

Interference with circulation due to clothing:

No.

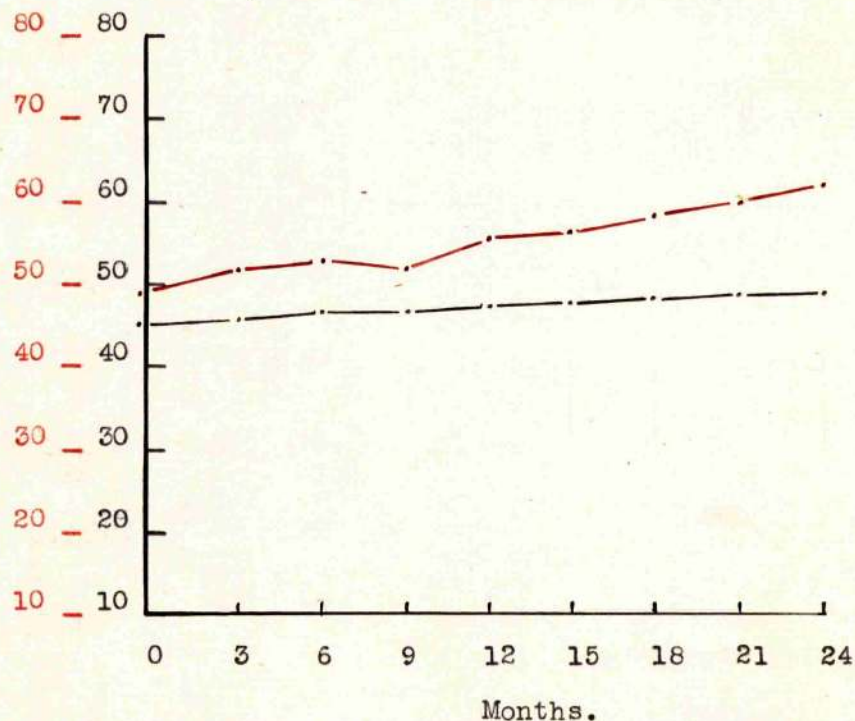
None.

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



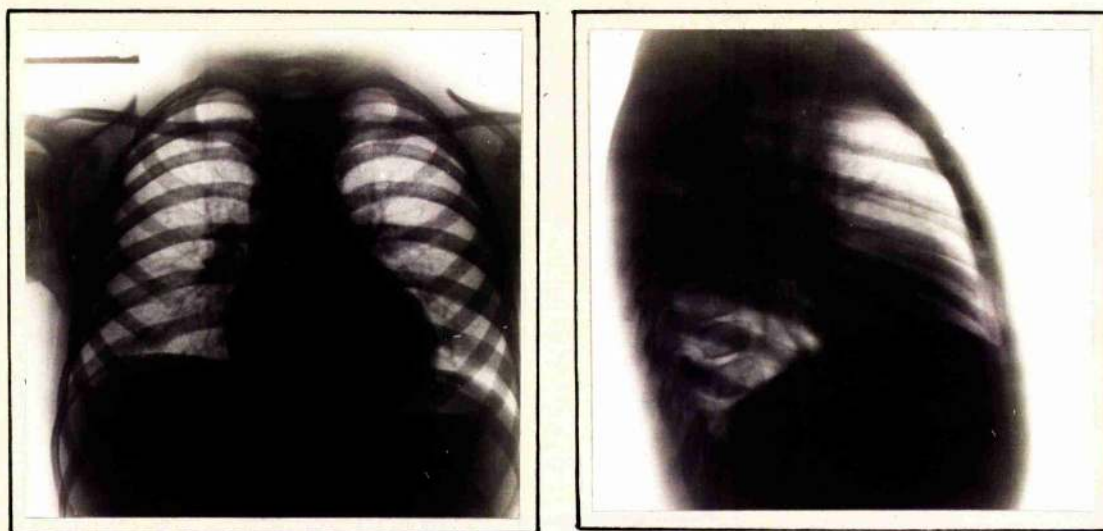


Plate 31. At First Examination.

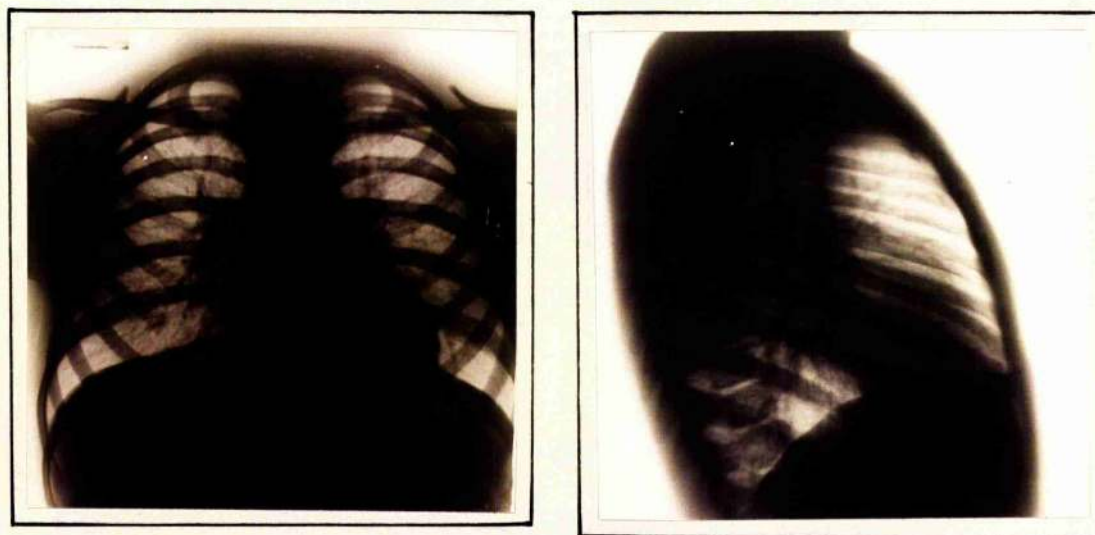


Plate 31 a. At Three Months.

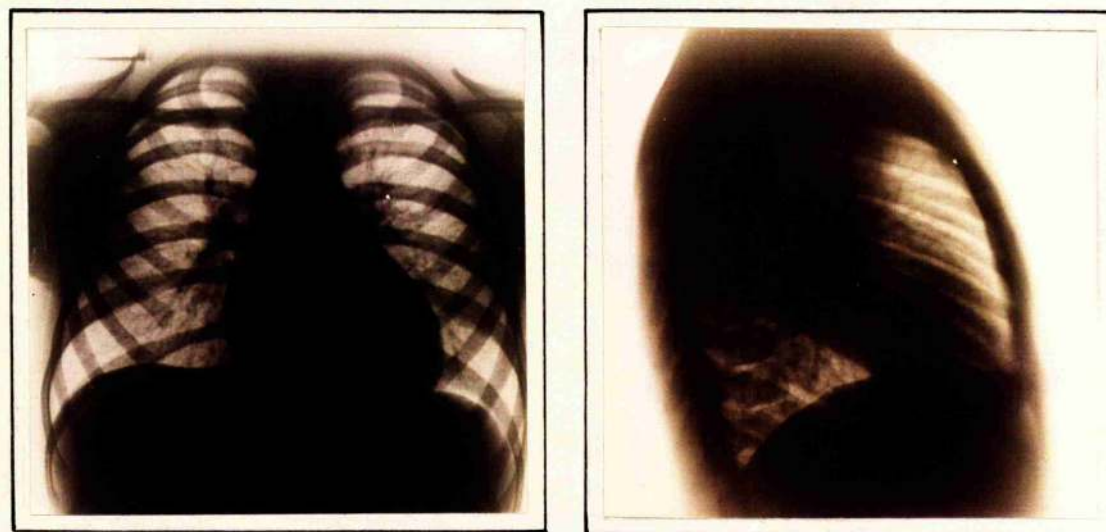


Plate 31 b. At Six Months.

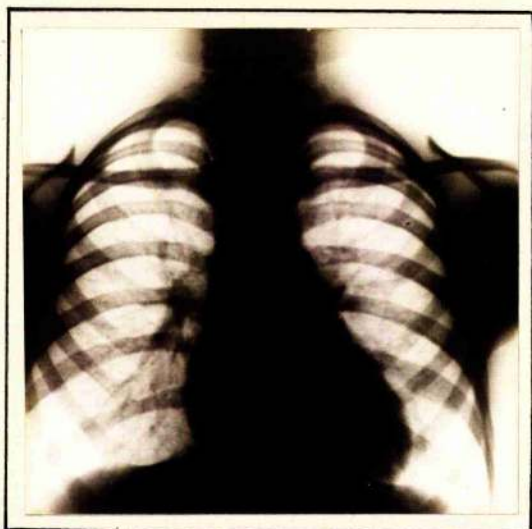


Plate 31 c. At One Year.

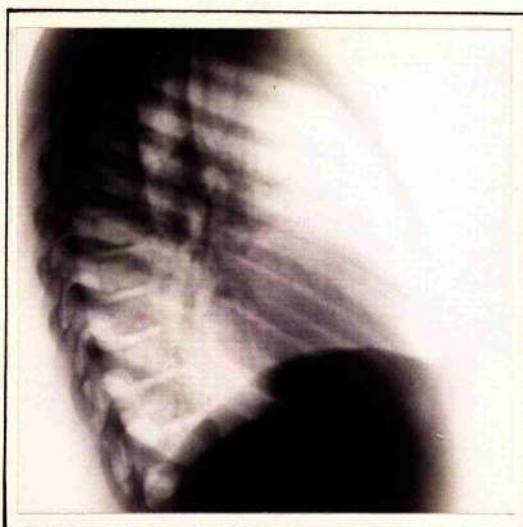
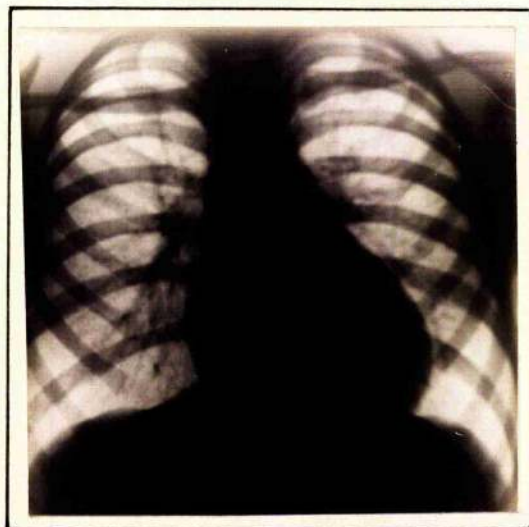


Plate 31 d. At Eighteen Months.

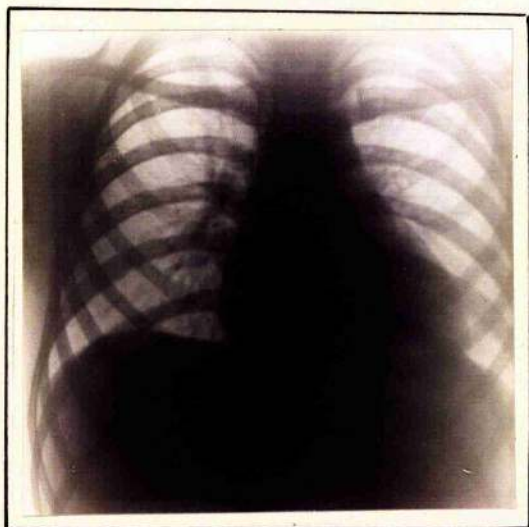


Plate 31 e. At Two Years.

GROUP II

MEASLES CONVALESCENTS

11 CASES

Name. A.McE. Sex. Male. Age. 6 years 5 months.

Date of Birth. 25/1/38.

Feeding. Cow's milk (not boiled) as mother did not want to breast feed.

Family History. Parents are alive and well. One sister died of gastro-enteritis aged one month. No family history of tuberculosis.

Previous Illnesses

Whooping cough	March,	1941.
Chickenpox	June,	1943.
Bronchitis	February,	1944.
Measles	May,	1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

June, 1944.

(6 years 5 months)

Height and Weight. 45.75 inches. 44 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw:	-54321	123456
Teeth in lower jaw:	654321	123456
Total number of teeth:	23	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids satisfactorily removed in May, 1942.

Naso-faucial Flora. Mainly M.catarrhalis, pneumococci, diphtheroids, staphylococci and streptococci.

Haematology.

Erythrocytes	5,720,000 per c.mm.
Leucocytes	12,288 per c.mm.
Haemoglobin	90 per cent. Colour Index 0.78

Differential Leucocyte Count:-

Neutrophils	55.00 per cent.	(6,758 per c.mm.)
Eosinophils	2.25 per cent.	(276 per c.mm.)
Basophils	1.00 per cent.	(122 per c.mm.)
Lymphocytes	39.25 per cent.	(4,823 per c.mm.)
Monocytes	2.50 per cent.	(307 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	29	54	17	0	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 22.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 8 inches. Skin texture fine. Anterior superficial veins over upper part of right side

of chest prominent. A few small enlarged glands on left side of neck. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 32. 'Chest regular and symmetrical. Heart short and broad.

Right lung: Root shadow very diffuse and glands prominent in all parts. Lung striation is generally increased, but most markedly into basal zone.

Left lung: The root shadow is similarly enlarged with a large mass towards the upper pole. The lung striation is mostly into basal zone.

Lateral view shows localised basal striation into posterior basal zone.'

SUBSEQUENT EXAMINATIONS

In July the child had mumps.

At Three Months (September, 1944)

(6 years 8 months)

Height and Weight. 46.5 inches (increase of 0.75 inch).
48 pounds (gain of 4 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest still prominent. No enlarged glands. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings.

Plate 32 a. 'Marked clearing of basal striation. Much less congestion in root shadow.'

At Six Months (December, 1944)

(6 years 11 months)

Height and Weight. 47 inches (increase of 0.5 inch).
50.5 pounds (gain of 2.5 pounds).

Physical Examination of Chest. No change in prominence of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 32 b. 'Little change in last three months. A patch of peribronchial congestion appears along right lower lobe bronchi. Along left upper lobe bronchi a small spot has become defined and there is a hardening of the corresponding group of bronchial glands.

Lateral view shows that glands are becoming more defined in outline.'

In April the child had a cough for six weeks, especially after lying down in bed at night.

At One Year (June, 1945)

(7 years 5 months)

Height and Weight. 48.25 inches (increase of 1.25 inches). 52 pounds (gain of 1.5 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest less prominent. Slight dullness over upper part of sternum extending towards right clavicle. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 32 c. 'Compared with plate of June, 1944 the root shadows remain unchanged in amount. The right basal increase in striation is now not so marked.'

At Eighteen Months (December, 1945)

(7 years 11 months)

Height and Weight. 49.25 inches (increase of 1 inch). 55 pounds (gain of 3 pounds).

Physical Examination of Chest. Anterior superficial veins over right side of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 32 d. 'The right mid-bronchial group of glands have firmed during the last six months. The right root shadow remains the same in extent. So, too, does the left, but here the left upper bronchial group of glands are slightly less well defined.'

In April the child had catarrhal jaundice.

At Two Years (June, 1946)

(8 years 5 months)

Height and Weight. 50.25 inches (increase of 1 inch).
57 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

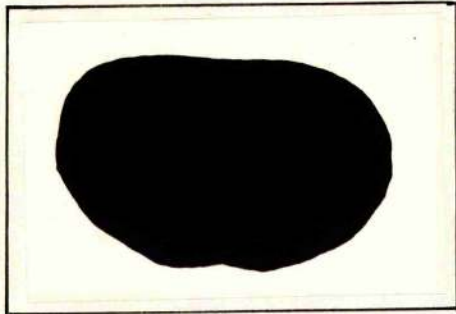
Plate 32 e. 'As compared with six months ago the peribronchial basal congestion is less marked.

As compared with two years ago the root shadows remain diffuse but show a slight improvement in quality. There is less congestion over right root generally and at upper pole of left root. The lung fields are clearer, particularly in the basal zones.

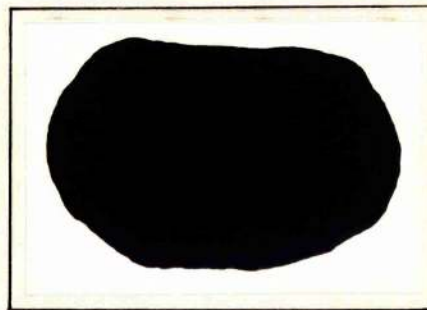
Lateral view confirms clearing of basal zone.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 32.At First Examination

A-P. diameter 5.00 inches.
L. diameter 8.00 inches.

Fig. 32 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

22.50 inches.

24.75 inches.

(Male. 6 years 4 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Wool	Shirt	Cotton
Trousers	Flannel	Trousers	Flannel
Pullover	Wool		
Coat	Tweed		
Scarf	Wool		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

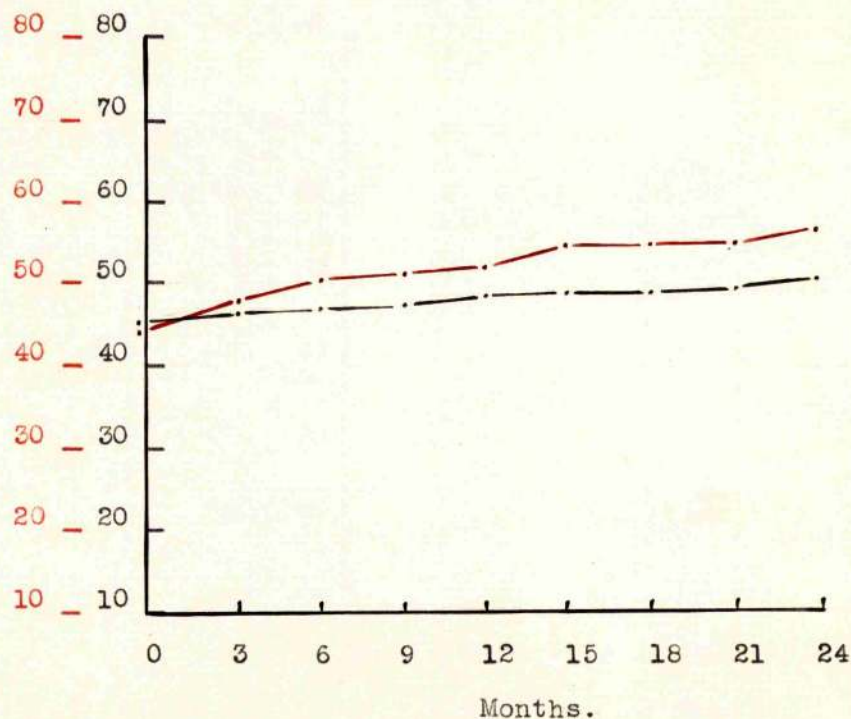
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



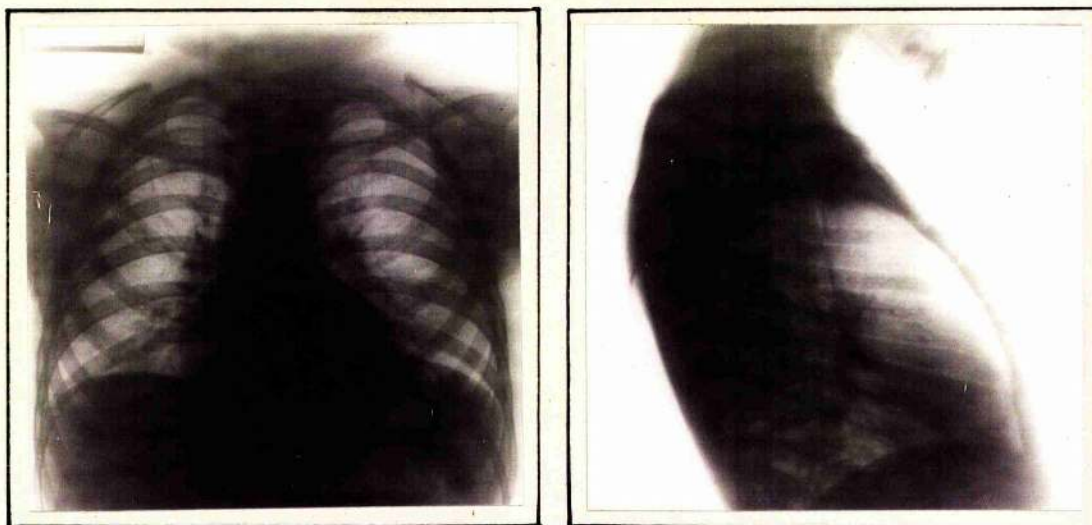


Plate 32. At First Examination.

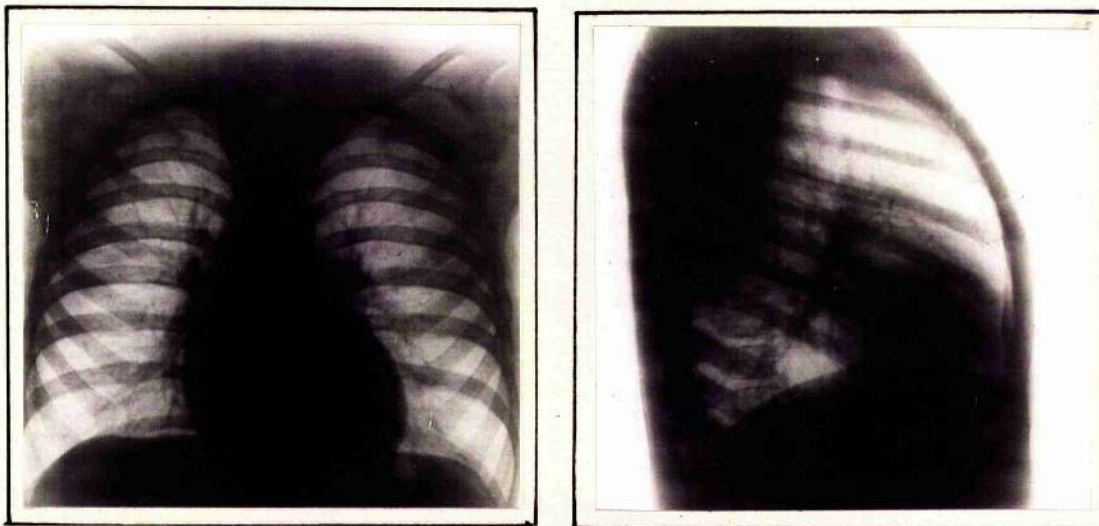


Plate 32 a. At Three Months.

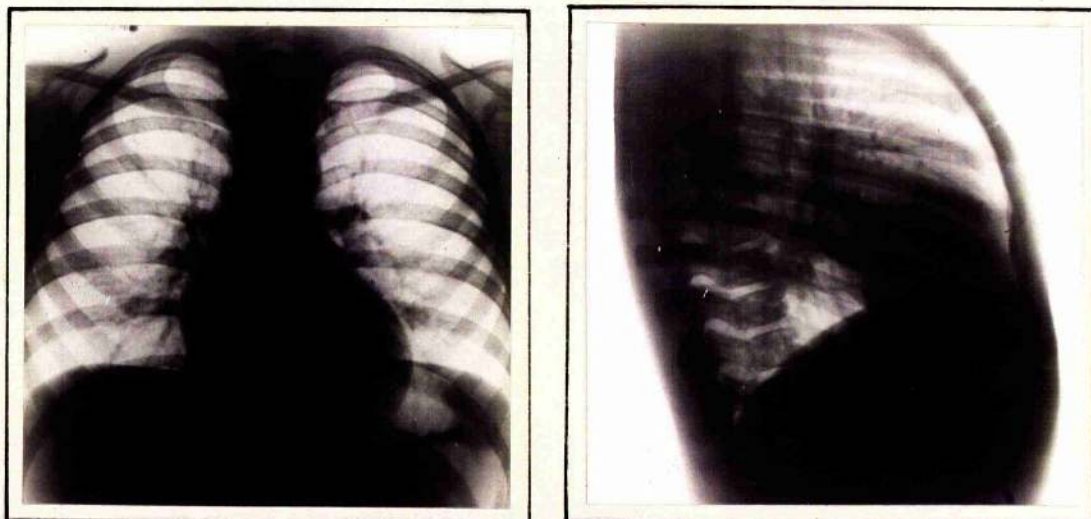


Plate 32 b. At Six Months.

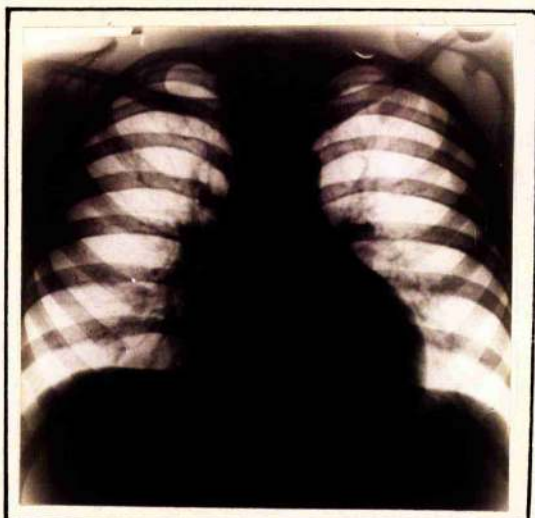


Plate 32 c. At One Year.

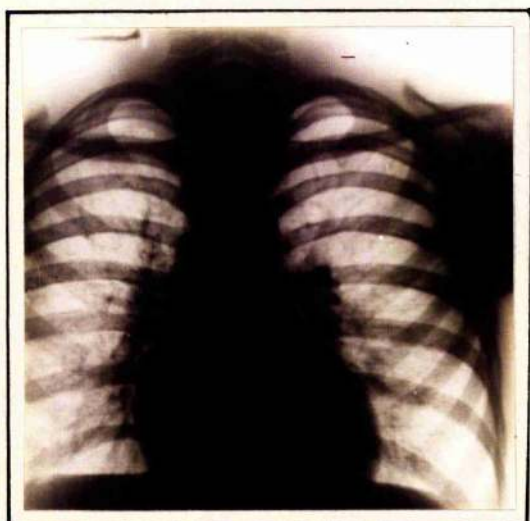


Plate 32 d. At Eighteen Months.

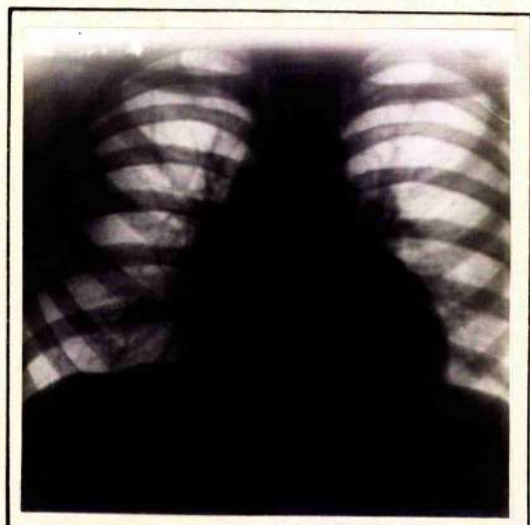


Plate 32 e. At Two Years.

Name. S.H. Sex. Female. Age. 4 years 11 months.

Date of Birth. 27/7/39.

Feeding. At breast for nine months.

Family History. Parents are alive and well. Two brothers aged twenty and fourteen years both healthy. No family history of tuberculosis.

Previous Illnesses

Bronchitis April, 1944.
Measles May, 1944.

Environment and Parental Care. The family resides in a five apartment house on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

June, 1944.

(4 years 11 months)

Height and Weight. 42.25 inches. 37 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. No enlargement of tonsils or adenoids.

Naso-faucial Flora. Mainly M.catarrhalis, staphylococci and pneumococci.

Haematology.

Erythrocytes 5,750,000 per c.mm.
Leucocytes 11,177 per c.mm.
Haemoglobin 80 per cent. Colour Index 0.70

Differential Leucocyte Count:-

Neutrophils 57.75 per cent. (6,454 per c.mm.)
Eosinophils 1.50 per cent. (167 per c.mm.)
Basophils 0.25 per cent. (27 per c.mm.)
Lymphocytes 35.00 per cent. (3,911 per c.mm.)
Monocytes 5.50 per cent. (614 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	22	40	37	0	1

Physical Examination of Chest. Muscular development good. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular with a few scattered moist sounds throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy ex-

tended to the first dorsal spine. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 33. 'Chest regular and symmetrical. Heart normal in size.

Right lung: Root shadow enlarged at upper pole with enlargement of tracheo-bronchial glands. Some increase of striation into basal zone.

Left lung: Accentuation of upper bronchial glands with surrounding congestion. Slight increase of striation basally.

Lateral view shows calcified tracheo-bronchial glands.

A calcified mass is present in anterior part of lung. Glandular masses centrally and along lower bronchi with one showing well down along posterior basal branch. Increased striation along anterior and posterior basal branches of bronchi.'

SUBSEQUENT EXAMINATIONS

In July the child had whooping cough.

At Three Months (September, 1944)

(5 years 2 months)

Height and Weight. 43.25 inches (increase of 1 inch).
41 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running.

Radiographic Findings

Plate 33 a. 'The root shadows remain large, but the glandular masses are not so pronounced. The striation remains the same in extent, but is much finer than before.'

At Six Months (December, 1944)

(5 years 5 months)

Height and Weight. 44.25 inches (increase of 1 inch).
42 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after running, and in the early morning.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 33 b. 'Slight increase in root shadow. Lung striation also increased to similar extent.

Lateral view shows calcified glands.'

At One Year (June, 1945)

(5 years 11 months)

Height and Weight. 45.5 inches (increase of 1.25 inches).
45 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 33 c. 'As compared with films of one year ago there is very little difference to be noted. The root shadows are equally diffuse and extensive and the lung striation remains generally increased to the same extent.

The lateral view shows a slight improvement in definition of the root shadow.'

At Eighteen Months (December, 1945)

(6 years 5 months)

Height and Weight. 46.75 inches (increase of 1.25 inches).
47 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 33 d. 'Right root shadow unchanged.

Left root improving; left upper bronchial glands beginning to firm.

Generally, increase in lung striation, hitherto noted, is less marked.

Lateral view shows hardening of upper bronchial glands.'

In March the child had a cough for ten days, especially after lying down in bed at night.

At Two Years (June, 1946)

(6 years 11 months)

Height and Weight. 48 inches (increase of 1.25 inches).
46 pounds (loss of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality

of the pectoriloquy extended to the first dorsal spine.
Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and
tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 33 e. 'As compared with six months ago there is an
increase of peribronchial congestion into the left upper lobe.
No change noted in lateral view.

As compared with two years ago the root shadow remains diff-
usely enlarged and there is little alteration in the appearance
of the gland masses. Those along right basal lobe bronchi and
and left upper lobe bronchus remain soft and ill-defined. The
vascular markings into those two lobes also remain increased.
Little change noted in lateral view.'

CYRTOMETER TRACINGS

(one quarter natural size)

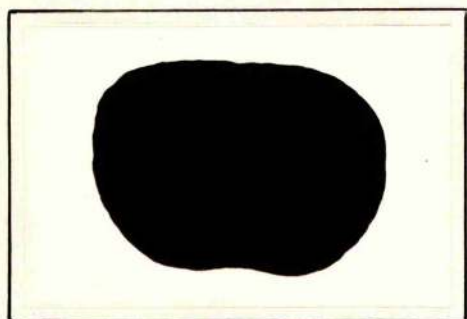


Fig. 33.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

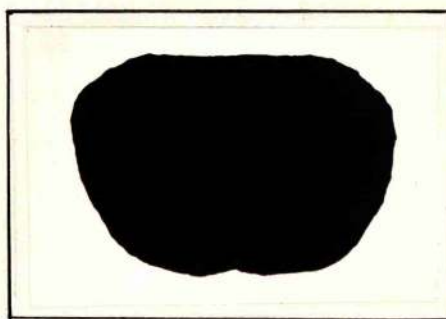


Fig. 33 a.

At Two Years

A-P. diameter 5.25 inches.
L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

20.00 inches.

22.00 inches.

(Female. 4 years 11 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Knickers	Silk
Knickers	Wool		
Shoes and socks.		Shoes and socks.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Kilt	Wool	Frock	Cotton
Pullover	Wool		
Cardigan	Wool		
Coat	Tweed		
Scarf	Wool		
Hat.		No hat.	

Overclothed:

No.

Constriction of chest due to clothing:

None.

Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.

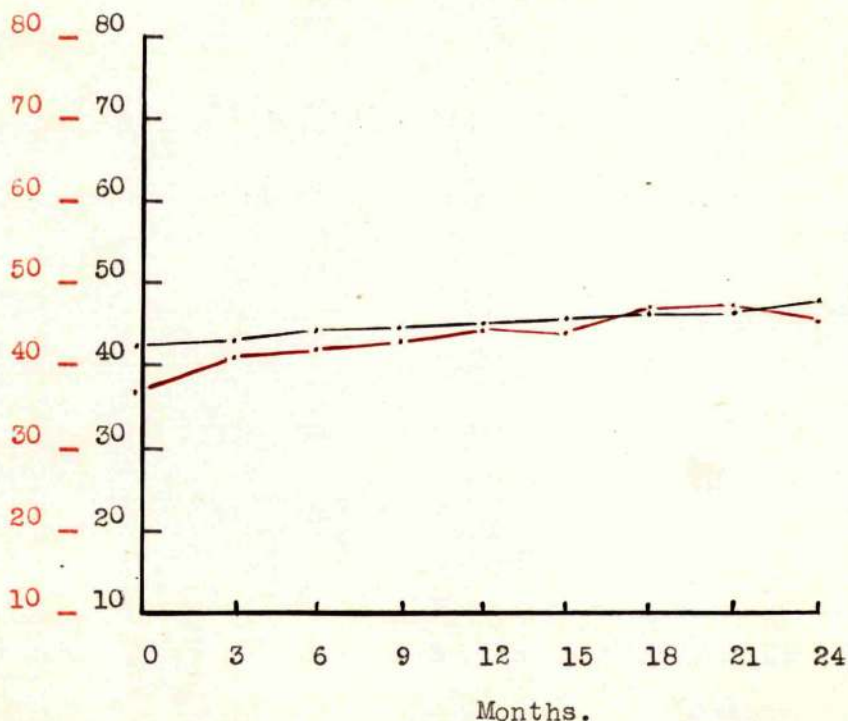




Plate 33. At First Examination.

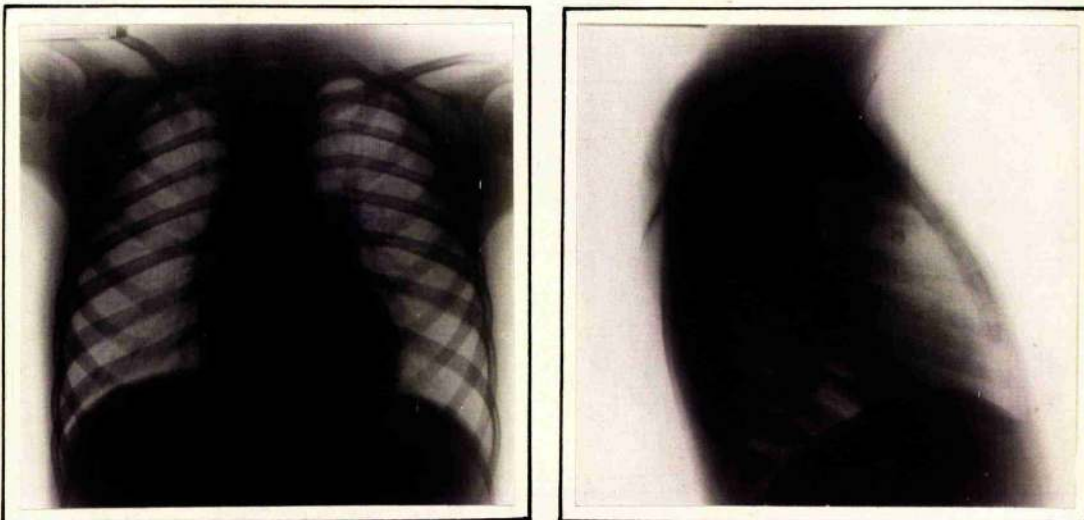


Plate 33 a. At Three Months.

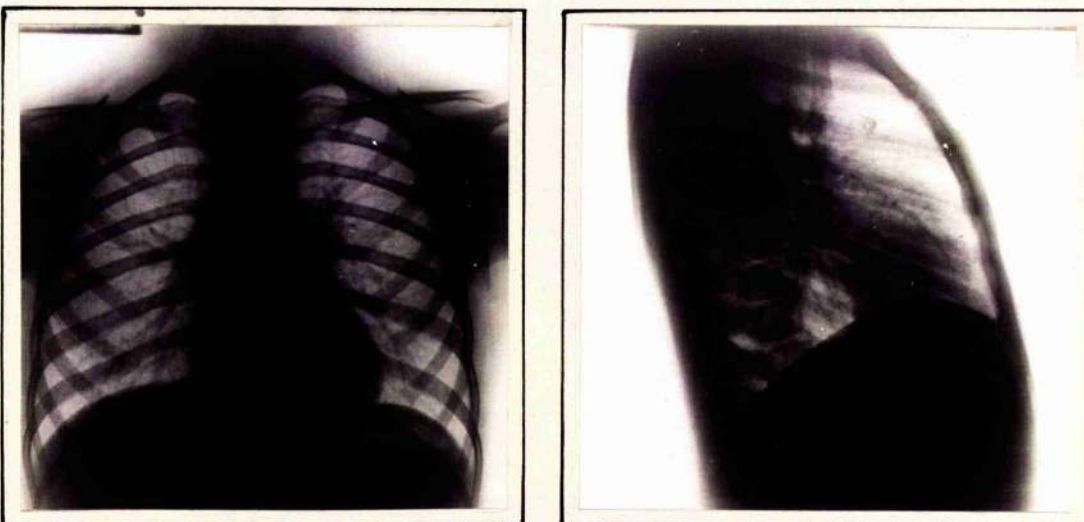


Plate 33 b. At Six Months.

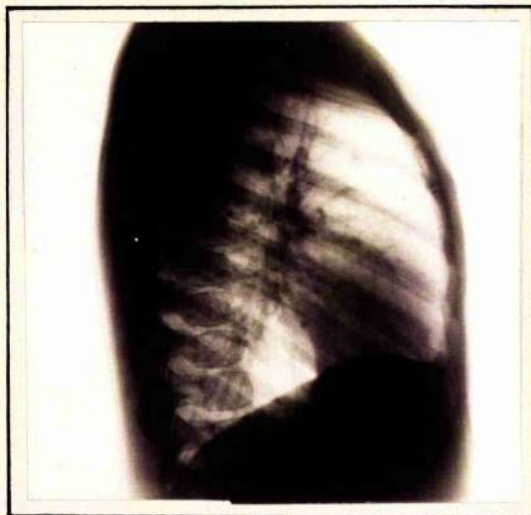
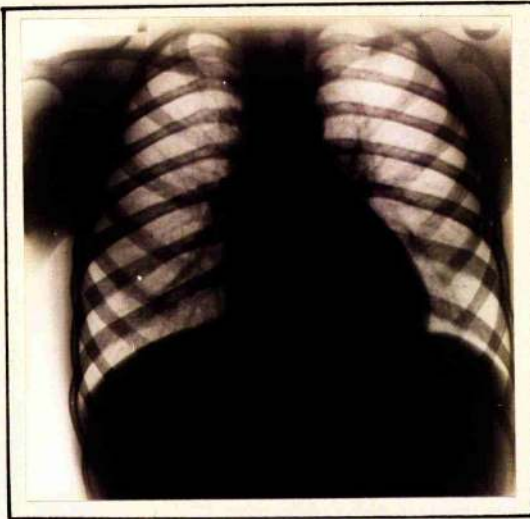


Plate 33 c. At One Year.

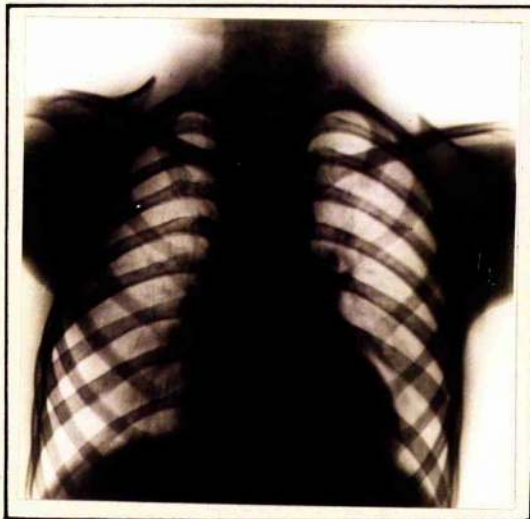


Plate 33 d. At Eighteen Months.

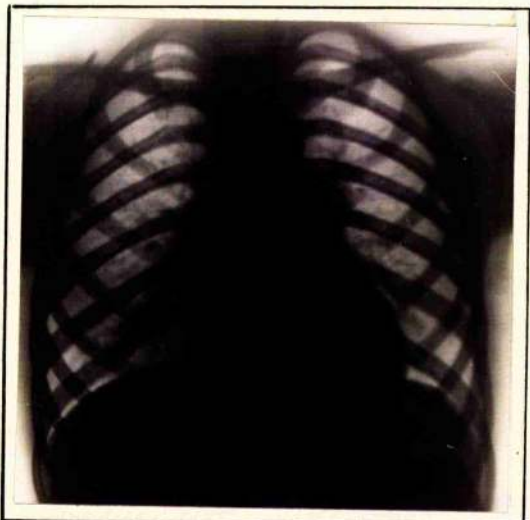


Plate 33 e. At Two Years.

Name. M.R. Sex. Female. Age. 8 years.

Date of Birth. 18/7/36.

Feeding. At breast for one week and thereafter fed on cow's milk (boiled) when lactation stopped.

Family History. Parents are alive and well. Only child. Her father's sister died eleven years ago of pulmonary tuberculosis when twenty-six years of age.

Previous Illnesses

Whooping cough	December, 1939.
Mumps	April, 1940.
Chickenpox	February, 1944.
Measles	May, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION.

June, 1944.

(8 years)

Height and Weight. 47 inches. 46 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	654321	1-3456
Teeth in lower jaw:	6--321	1234-6
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids satisfactorily removed in February, 1943.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, streptococci, pneumococci and diphtheroid types.

Haematology.

Erythrocytes	4,960,000 per c.mm.
Leucocytes	17,277 per c.mm.
Haemoglobin 80 per cent.	Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils	65.50 per cent.	(11,316 per c.mm.)
Eosinophils	6.75 per cent.	(1,166 per c.mm.)
Basophils	0.50 per cent.	(86 per c.mm.)
Lymphocytes	25.50 per cent.	(4,405 per c.mm.)
Monocytes	1.75 per cent.	(302 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	18	50	29	3	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 23 inches. Antero-posterior diameter 5 inches. Lateral diameter 7.75 inches. Skin texture fine. Anterior superficial veins prominent over right half of chest.

extending from upper part of sternum to shoulder. No enlarged glands. Slight dullness between spine and right scapula. Breath sounds vesicular and harsh. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular with soft mitral systolic murmur at apex not conducted into axilla.

Radiographic Findings

Plate 34. 'Broad chest, regular and symmetrical. Heart within normal limits.

Right lung: Diffuse root shadow with glandular masses centrally. Slight increase of lung striation generally.

Left lung: Root shadow most pronounced towards upper limit, with some upper bronchial glands evident. General increase of lung striation.

Lateral view shows central glandular masses. Striation increased in all directions.'

SUBSEQUENT EXAMINATIONS

At Three Months (September, 1944)

(8 years 3 months)

Height and Weight. 47.25 inches (increase of 0.25 inch). 49 pounds (gain of 3 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest less prominent. On percussion and auscultation no abnormality was detected.

D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 34 a. 'There is a reduction in the size of the root shadow together with a more defined outline. Inflammatory reaction is less marked. The glands are smaller and harder. The bronchial tree is less marked.'

At Six Months (December, 1944)

(8 years 6 months)

Height and Weight. 47.75 inches (increase of 0.5 inch). 50 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 34 b. 'Improvement continues, slight in extent, more pronounced in quality, of root shadows. There is also less marked lung striation.

Lateral view emphasises the improvement in the root shadow generally.'

At One Year (June, 1945)

(9 years)

Height and Weight. 48.75 inches (increase of 1 inch).
51 pounds (gain of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of right side of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 34 c. 'Very slight diminution in extent of root shadow on right and left sides, with no improvement of quality of glandular shadows. Lung striation remains increased in amount.

Lateral view shows better definition of right upper bronchial gland groups.'

At Eighteen Months (December, 1945)

(9 years 6 months)

Height and Weight. 49.75 inches (increase of 1 inch).
52 pounds (gain of 1 pound).

Physical Examination of Chest. One large superficial vein very prominent, extending from sternum to right shoulder. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 34 d. 'As compared with six months ago the present film shows an increase in the amount of the root shadows generally, and also in the amount of lung striation throughout the right lung field particularly.

Lateral view shows increased root markings.'

At Two Years (June, 1946)

(10 years)

Height and Weight. 50.75 inches (increase of 1 inch).
56 pounds (gain of 4 pounds).

Physical Examination of Chest. One prominent anterior superficial vein extending from sternum to right shoulder. On percussion and auscultation no abnormality was detected.

D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 34 e. 'As compared with six months ago there is less peribronchial congestion present. This improvement is general throughout both lung fields.

Lateral view shows less peribronchial congestion, especially in posterior basal zone.

As compared with two years ago the root shadows remain diffuse and show little alteration in quantity or quality of shadow. In particular the root shadows continue into right basal and left upper zones as before. No change is noted in the gland masses.

Lateral view shows little change.'

CYRTOMETER TRACINGS

(one quarter natural size)

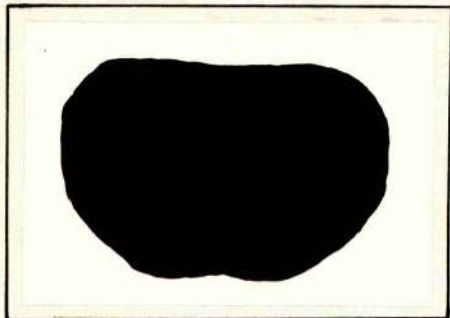


Fig. 34.

At First Examination

A-P. diameter 5.00 inches. A-P. diameter 5.50 inches.
L. diameter 7.75 inches. L. diameter 8.00 inches.

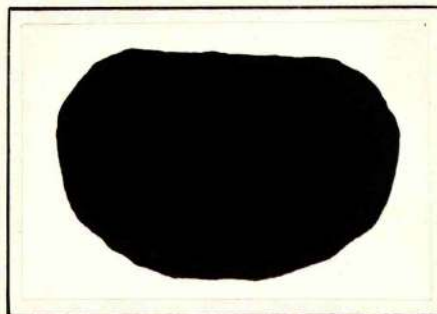


Fig. 34 a.

At Two Years

Circumference of Chest During Quiet Respiration

23 inches.

24 inches.

(Female. 8 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Knickers	Wool	Knickers	Silk

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Kilt	Wool	Frock	Silk
Jumper	Wool		
Cardigan	Wool		
Coat	Nap		
Scarf	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

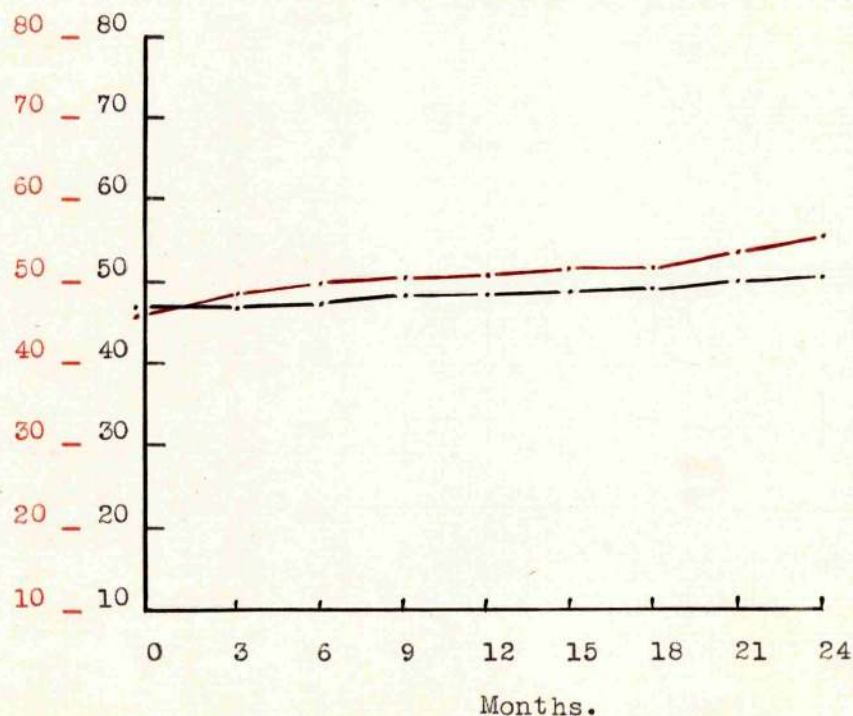
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



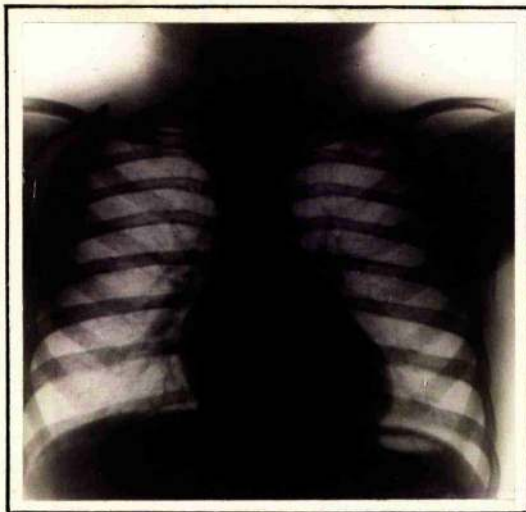


Plate 34. At First Examination.

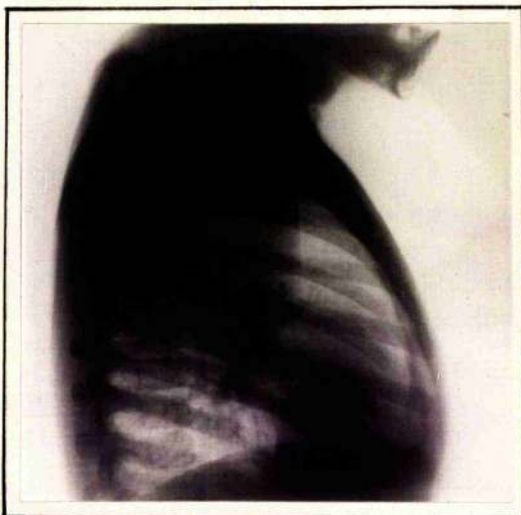
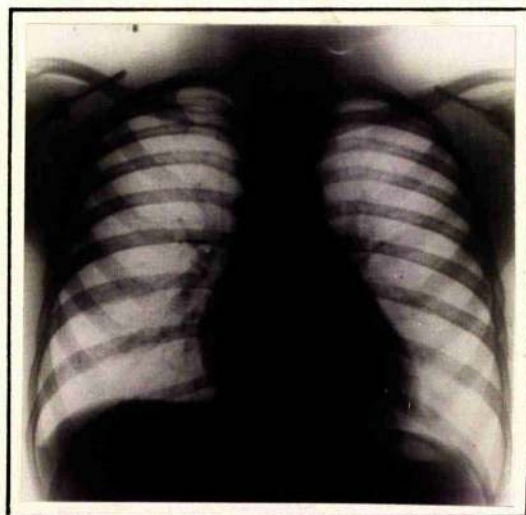


Plate 34 a. At Three Months.

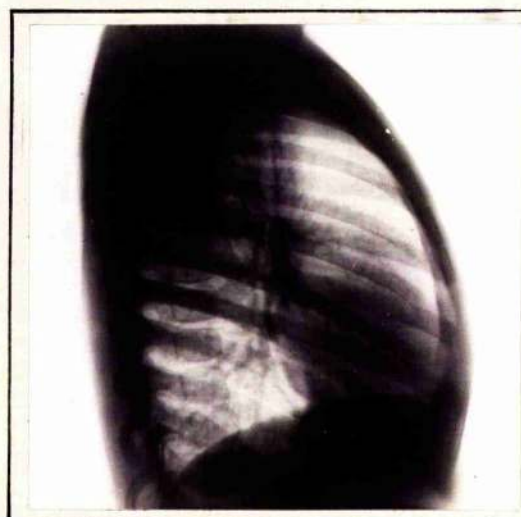
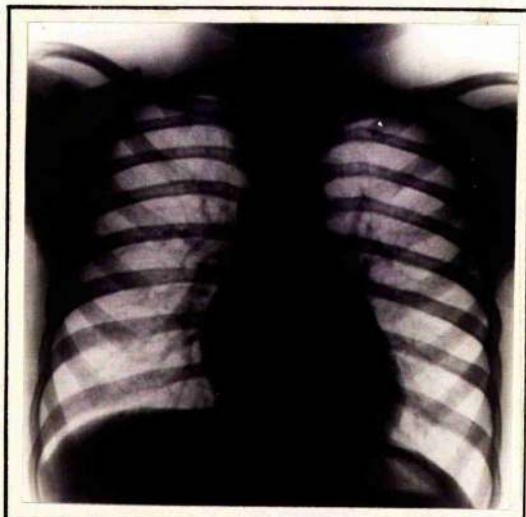


Plate 34 b. At Six Months.

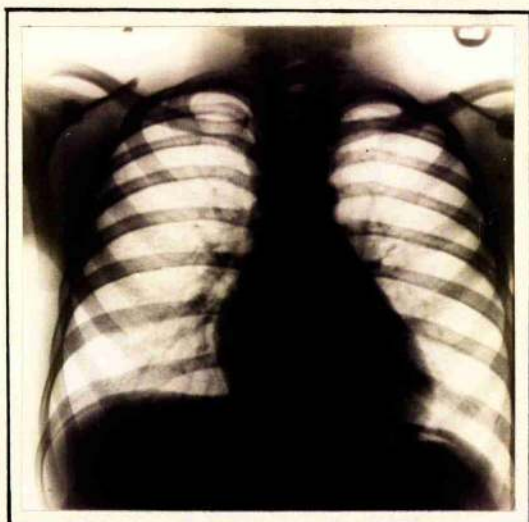


Plate 34 c. At One Year.

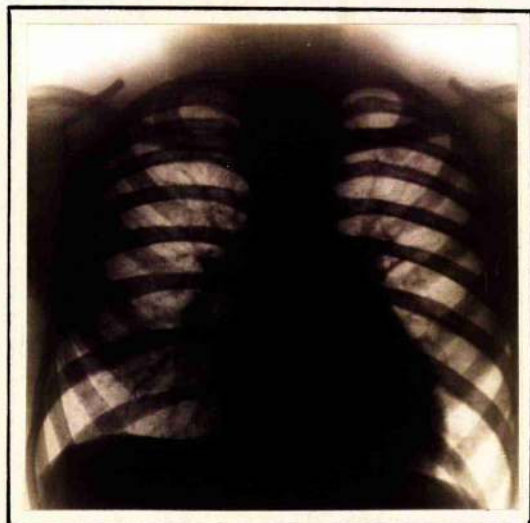


Plate 34 d. At Eighteen Months.

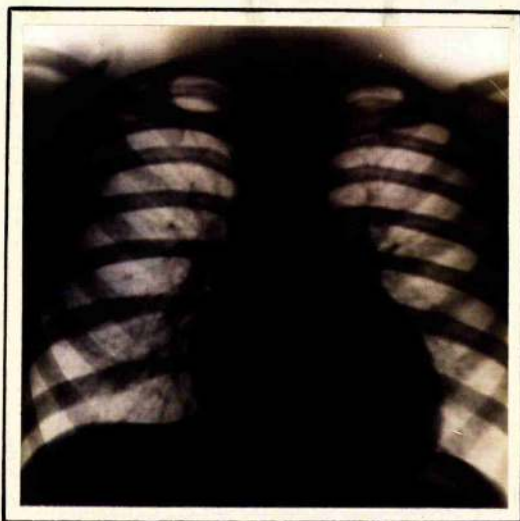


Plate 34 e. At Two Years.

Name. W.J. Sex. Male. Age. 7 years 11 months.

Date of Birth. 26/7/36.

Feeding. At breast for nine months.

Family History. Parents are alive and well. Two sisters, one aged fifteen and the other twelve years both healthy. No family history of tuberculosis.

Previous Illnesses

Scarlet fever	February, 1943.
Whooping cough	April, 1943.
German measles	July, 1943.
Bronchitis	February, 1944.
Chickenpox	April, 1944.
Measles	June, 1944.

Environment and Parental Care. The family resides in a three room and kitchen flat in the centre of a town. The bedroom windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

June, 1944.

(7 years 11 months)

Height and Weight. 51.5 inches. 58 pounds.

Mouth and Teeth. Tongue moist and clean. Decayed teeth have been removed, remainder in good condition.

Teeth in upper jaw:	6-4-21	12--5-
Teeth in lower jaw:	---21	12----
Total number of teeth:		11

Ear, Nose and Throat. Ears healthy. No nasal discharge. No enlargement of tonsils or adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis*, pneumococci, diphtheroids and staphylococci (aureus).

Haematology.

Erythrocytes	5,460,000 per c.mm.
Leucocytes	8,200 per c.mm.
Haemoglobin 90 per cent.	Colour Index 0.83

Differential Leucocyte Count:-

Neutrophils	58.25 per cent.	(4,776 per c.mm.)
Eosinophils	2.75 per cent.	(225 per c.mm.)
Basophils	0.25 per cent.	(20 per c.mm.)
Lymphocytes	36.75 per cent.	(2,931 per c.mm.)
Monocytes	3.00 per cent.	(246 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	32	49	17	2	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 24 inches. Antero-posterior diameter 6 inches. Lateral diameter 8 inches. Skin texture fine. The anterior superficial veins over upper part of chest

and extending towards both shoulders are prominent. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was positive.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 35. 'Chest tends to square form, being broad apically. Regular and symmetrical. Heart normal.

Right lung: Diffuse root shadow with central gland mass and lower bronchial glands prominent. Increased striation into base.

Left lung: Similar diffuse root shadow with upper bronchial gland masses prominent. Striation increased generally, more particularly towards apex and base.

Lateral view shows increased striation into posterior basal zone particularly.'

SUBSEQUENT EXAMINATIONS

At Three Months (September, 1944)

(8 years 2 months)

Height and Weight. 52.25 inches (increase of 0.75 inch). 63 pounds (gain of 5 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest less prominent. Percussion note clear. Breath sounds vesicular with a few scattered moist sounds heard throughout chest, especially on right side. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

The child has had a cough for the past ten days, especially after lying down in bed at night.

Radiographic Findings

Plate 35 a. 'Increase in inflammatory reaction around roots generally. Increase in striation in right upper lobe to a small area of opacity in infraclavicular area, ? primary focus of tuberculosis.'

At Six Months (December, 1944)

(8 years 5 months)

Height and Weight. 53 inches (increase of 0.75 inch). 71 pounds (gain of 8 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 35 b. 'Root shadows show little change from previous film. The right upper lobe striation is, however, not now so prominent, though it still shows in the lateral view.'

In May the child had a cough for ten days, especially after lying down in bed at night.

At One Year (June, 1945)

(8 years 11 months)

Height and Weight. 54 inches (increase of 1 inch).
72 pounds (gain of 1 pound).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of chest. Slight inter-scapular dullness. Breath sounds harsher on right side than on left. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 35 c. 'The only change to be noted is the slight increase in the amount of lung striation especially on the right side into the right basal zone. The appearance of the root shadow remains unaltered.'

Lateral view confirms increase in linear markings.'

At Eighteen Months (December, 1945)

(9 years 5 months)

Height and Weight. 55.5 inches (increase of 1.5 inches).
81 pounds (gain of 9 pounds).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of chest. Slight inter-scapular dullness. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 35 d. 'The present film shows marked improvement as compared with that of six months ago. The root shadows remain the same in both quantity and quality, but the lung fields are clear of the previously noted increase in the vascular markings.'

During February and March the child had a cough, especially after lying down in bed at night.

At Two Years (June, 1946)

(9 years 11 months)

Height and Weight. 56.5 inches (increase of 1 inch).
84 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 35 e. 'Compared with six months ago there is no appreciable change noted.'

Compared with two years ago the right root shadow shows no change save for that caused by growth. The left root shadow is however, larger and more diffuse at its upper extremity, suggesting an increased degree of glandular and peribronchial congestion. The right lung field shows a more normal amount of striation, that of the left lung field remains increased.

Lateral view shows clearing of peribronchial congestion in posterior basal zone.'

CYRTOMETER TRACINGS

(one quarter natural size)

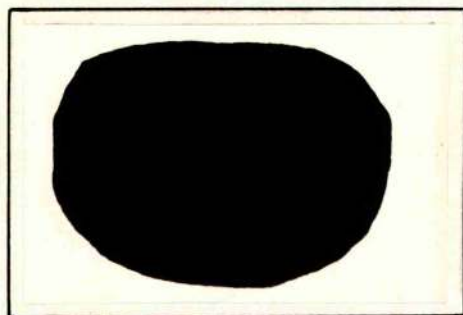


Fig. 35.

At First Examination.

A-P. diameter 6.00 inches.
L. diameter 8.00 inches.

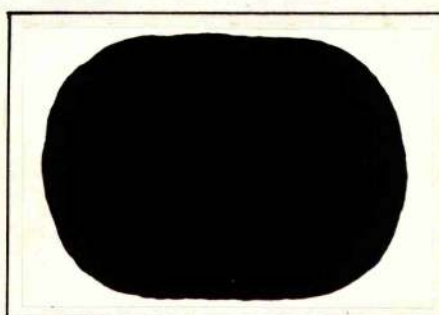


Fig. 35 a.

At Two Years.

A-P. diameter 6.50 inches.
L. diameter 8.75 inches.

Circumference of Chest During Quiet Respiration

24 inches.

27 inches.

(Male. 7 years 11 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Combinations	Wool	Pants	Cotton
Pants	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Jersey	Wool	Trousers	Flannel
Trousers	Flannel		
Coat	Tweed		
Scarf	Wool		

No cap.

No cap.

Overclothed:

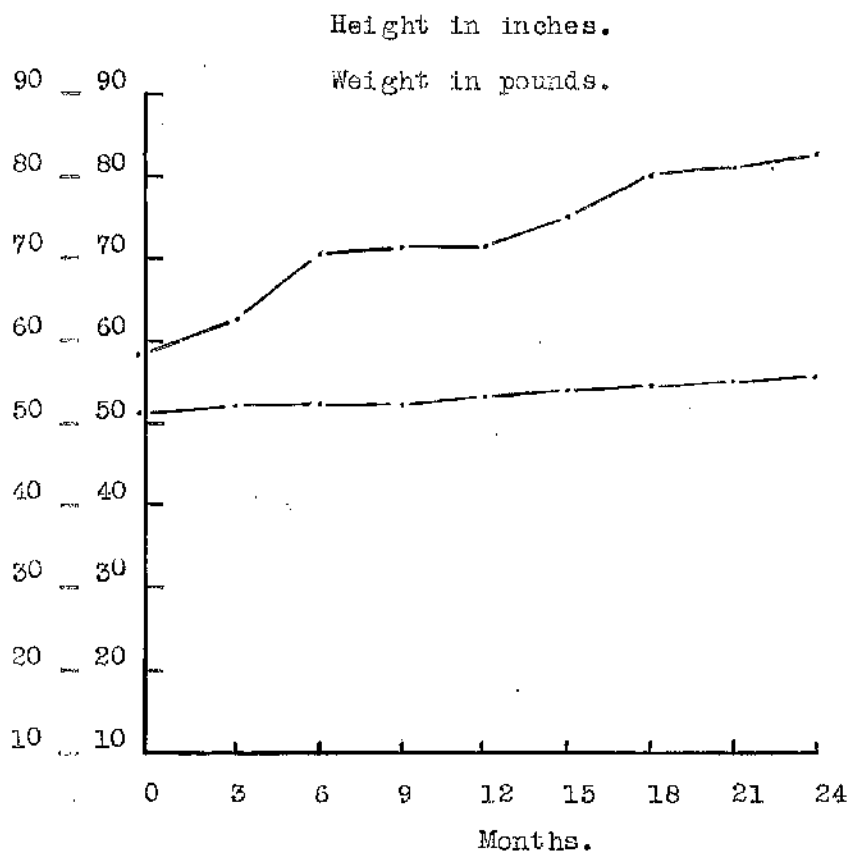
Yes.

Constriction of chest due to clothing:

None.

Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

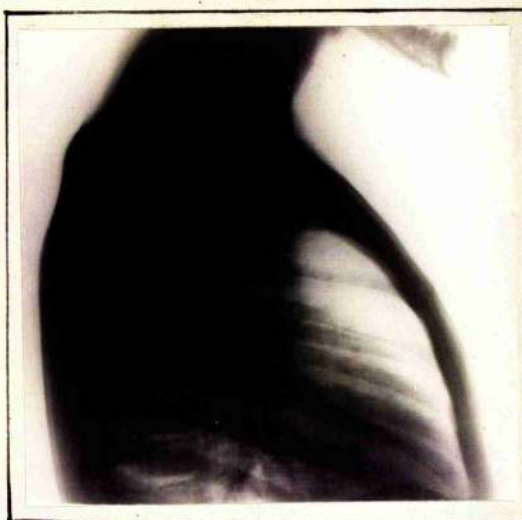
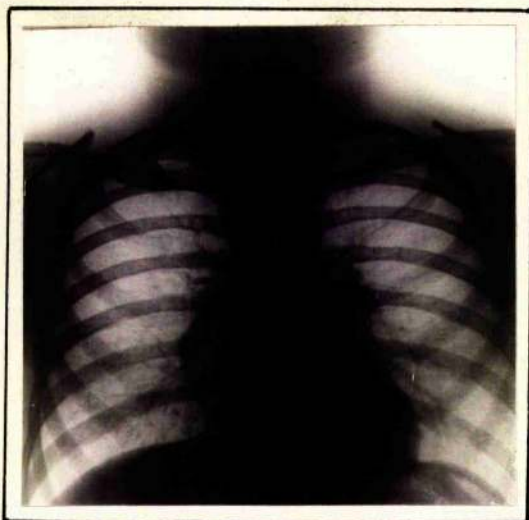


Plate 35. At First Examination.

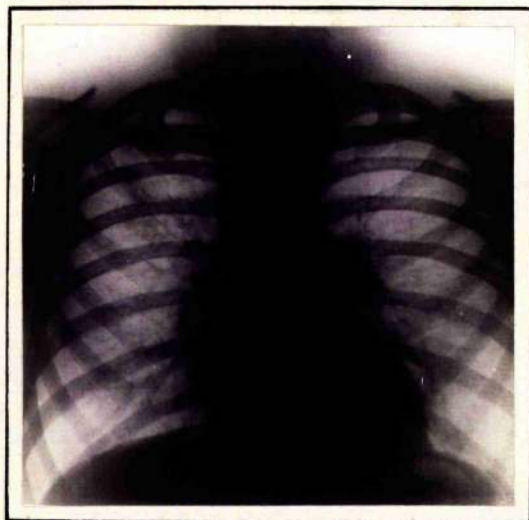


Plate 35 a. At Three Months.

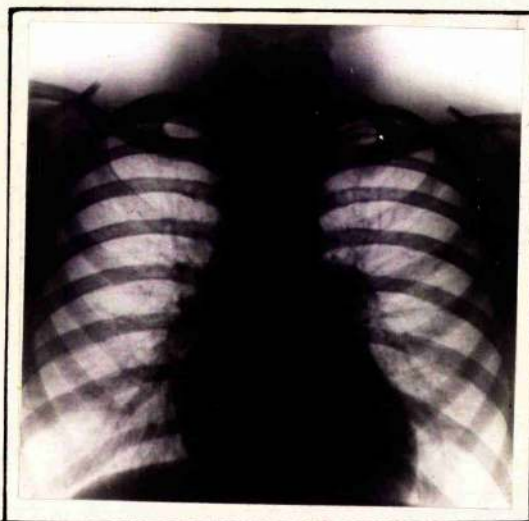


Plate 35 b. At Six Months.

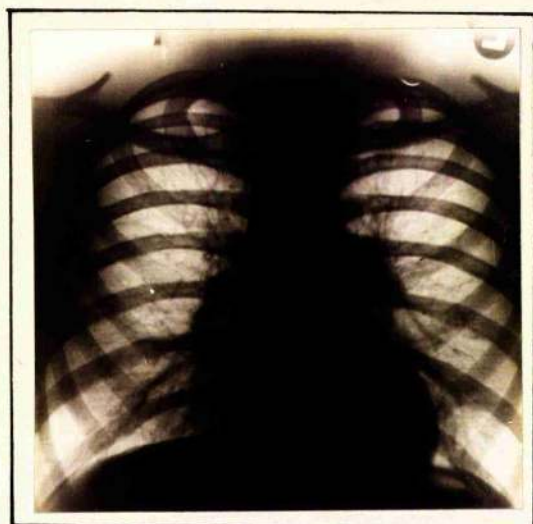


Plate 35 c. At One Year.

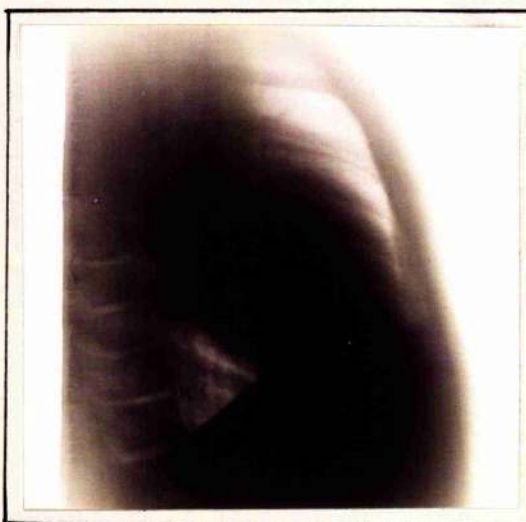
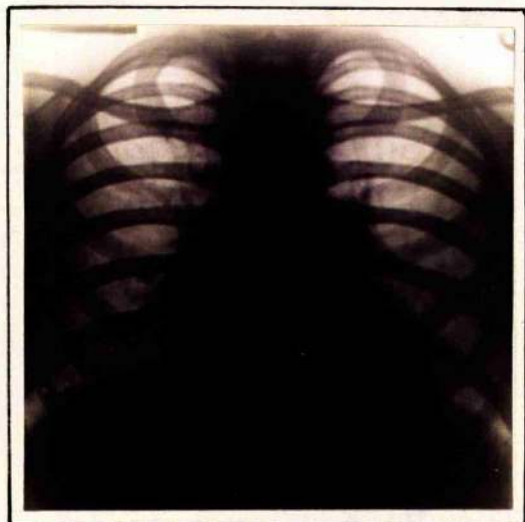


Plate 35 d. At Eighteen Months.

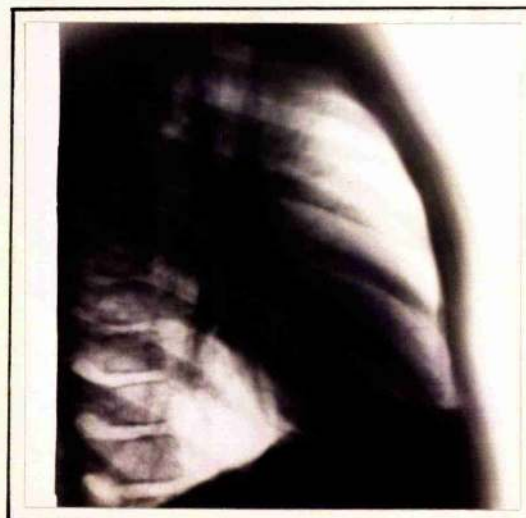
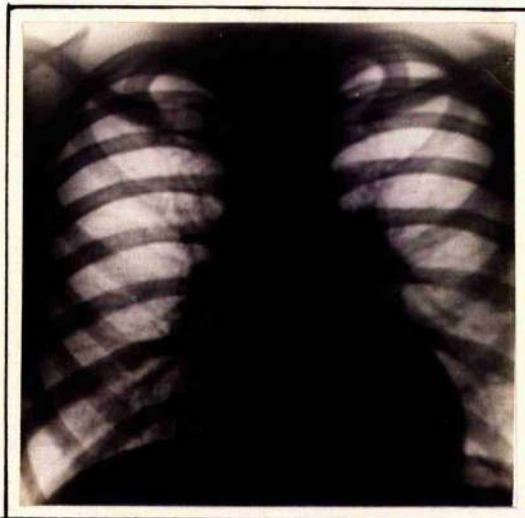


Plate 35 e. At Two Years.

Name. M.W. Sex. Female. Age. 4 years 3 months.

Date of Birth. 29/3/40.

Feeding. At breast for ten months.

Family History. Parents are alive and well. One brother aged one year is healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.

Measles May, 1944.

Environment and Parental Care. The family resides in a tenement house consisting of two rooms in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

June, 1944.

(4 years 3 months)

Height and Weight. 40.25 inches. 36 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 54321 12345

Teeth in lower jaw: 54321 12345

Total number of teeth: 20

Ear, Nose and Throat. Serous discharge from right ear. Small perforation present and drum is pink. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, pneumococci, diphtheroids, streptococci and coliform bacilli.

Haematology.

Erythrocytes 5,550,000 per c.mm.

Leucocytes 8,444 per c.mm.

Haemoglobin 90 per cent. Colour Index 0.81

Differential Leucocyte Count:-

Neutrophils	56.75 per cent.	(4,791 per c.mm.)
Eosinophils	8.00 per cent.	(675 per c.mm.)
Basophils	1.00 per cent.	(84 per c.mm.)
Lymphocytes	30.00 per cent.	(2,533 per c.mm.)
Monocytes	4.25 per cent.	(358 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	18	37	39	6	0

Physical Examination of Chest. Muscular development good. Scapulae normal. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 4.75 inches. Lateral diameter 6.25 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. Two small enlarged glands in posterior triangle on right side of neck. Percussion note clear. Breath sounds

vesicular. No adventitious sounds heard. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 36. 'Chest well shaped and symmetrical. Heart normal in size.

Right lung: Root shadows increased in all areas with enlarged upper bronchial and hilar glands. Slight increase of lung striation towards apex and base.

Left lung: Root shadow enlarged in upper half with a large mass of upper bronchial glands showing. Increased striation into apical zone.

Lateral view shows striation marked into posterior basal zone.'

SUBSEQUENT EXAMINATIONS

At Three Months (September, 1944)

(4 years 6 months)

Height and Weight. 41.25 inches (increase of 1 inch).
37 pounds (gain of 1 pound).

Physical Examination of Chest. Enlarged glands in right side of neck. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

The discharge from the right ear has stopped and perforation has healed. Hearing is good.

Radiographic Findings

Plate 36 a. 'Slight diminution in extent of root shadow with definite improvement in quality. Right tracheo-bronchial glands calcified. Bronchial glands smaller and firmer. Left upper bronchial glands show less surrounding inflammation. Lung fields clearer.

Lateral view shows definite improvement in root shadow.'

At Six Months (December, 1944)

(4 years 9 months)

Height and Weight. 41.5 inches (increase of 0.25 inch).
39 pounds (gain of 2 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. Glands still present in neck. Slight dullness over upper part of sternum and also over interscapular region. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was present. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 36 b. 'Improvement continues, with further reduction in amount of root shadows and continued hardening of the lymph glands especially those in upper bronchial groups both right and left.

Lateral view confirms hardening of upper bronchial glandular shadows.'

In May the child was listless and had no appetite. She had a cough which was spasmodic in character, but there was no whoop or vomiting.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 36 c. 'Root shadows right and left remain as diffuse as before. There is perhaps a slight improvement in the definition of both right and left upper bronchial gland groups. Lung markings in right basal zone are slightly increased.'

During the whole of June and part of July the child remained listless and had no appetite and had a cough, which was spasmodic in character.

She began to improve towards the end of July and has remained well ever since and has no cough. In November she removed with her parents to live in the country.

At Eighteen Months (December, 1945)

(5 years 9 months)

Height and Weight. 43.75 inches (increase of 1 inch).
41 pounds (gain of 2 pounds).

Physical Examination of Chest. Reduction in enlargement of the anterior superficial veins over upper part of chest. No adenitis. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 36 d. 'As compared with six months ago the present film shows a distinct reduction in the extent of the root shadows, both right and left. The small glands associated with right and left upper lobe bronchi continue to harden and the right basal striation is less in amount.

Lateral view shows finning of whole root shadow.'

At Two Years (June, 1946)

(6 years 3 months)

Height and Weight. 45.25 inches (increase of 1.5 inches).
44 pounds (gain of 3 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 36 e. 'As compared with six months ago there is a slight improvement to be noted in the extent of the root shadow and in the lung striation into right base.

Lateral view shows diminution in root congestion. Glands are all small and hard.

As compared with two years ago there is a definite diminution in the extent of the root shadows and also in the amount of the linear markings throughout the lung fields. The glands, particularly those along the right and left upper lobe bronchi are small and very hard.'

CYRTOMETER TRACINGS

(one quarter natural size)

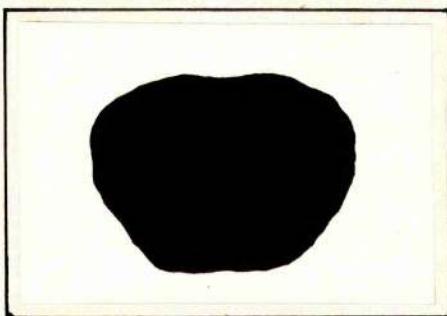


Fig. 36

At First Examination

A-P. diameter 4.75 inches.
- L. diameter 6.25 inches.

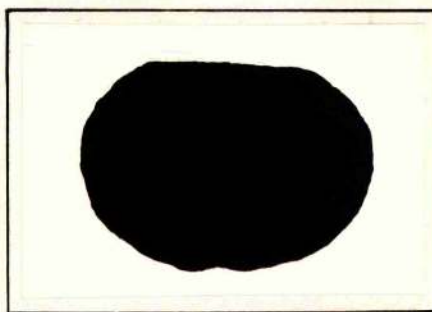


Fig. 36 a.

At Two Years

A-P. diameter 5.00 inches.
L. diameter 7.00 inches.

Circumference of Chest During Quiet Respiration

20 inches.

21 inches.

(Female. 4 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Silk
Bodice	Cotton	Knickers	Silk
Knickers	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Dress	Velvet	Dress	Cotton
Cardigan	Wool		
Coat	Nap		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

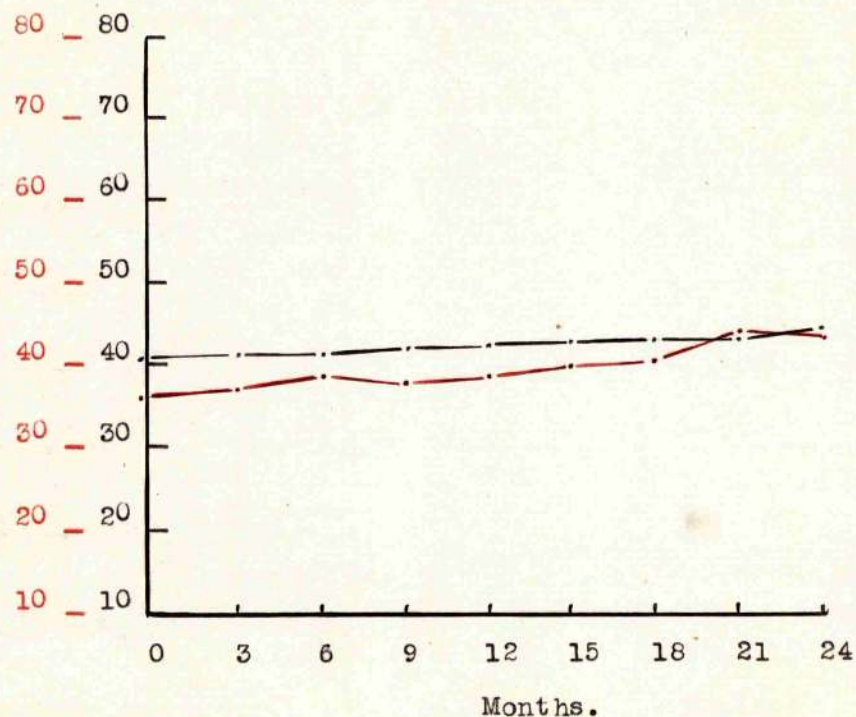
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



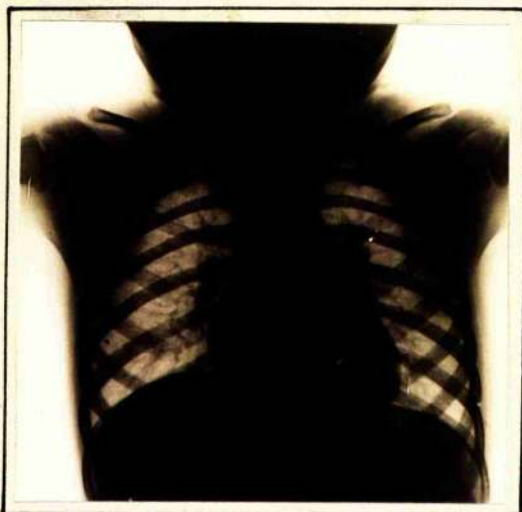


Plate 36. At First Examination.

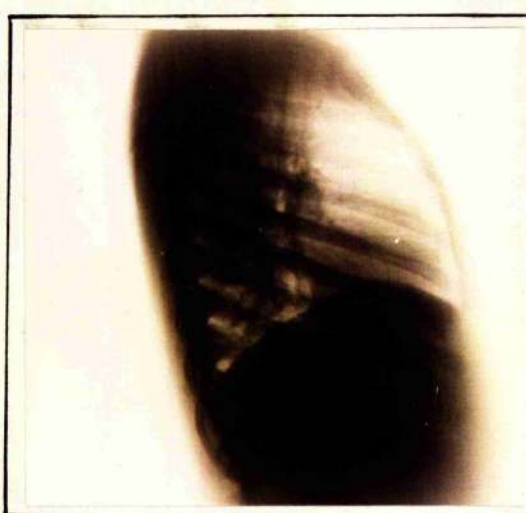
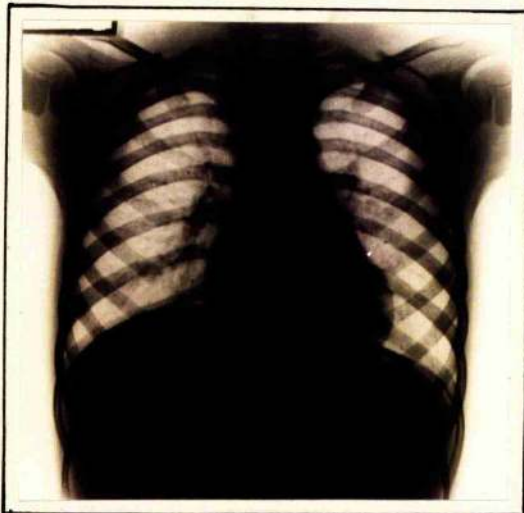


Plate 36 a. At Three Months.

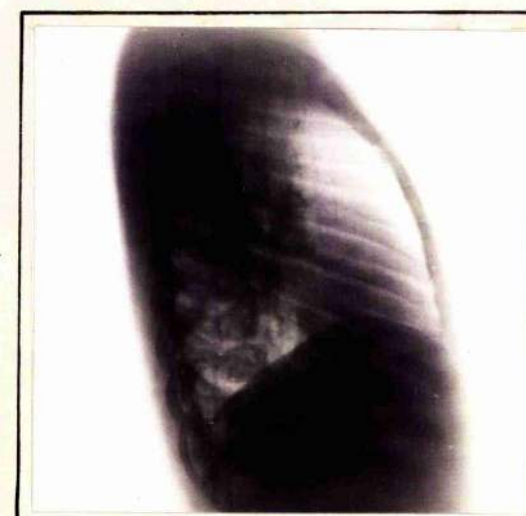
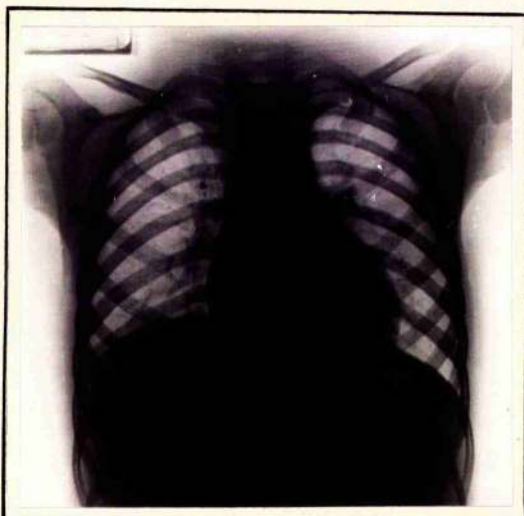


Plate 36 b. At Six Months.

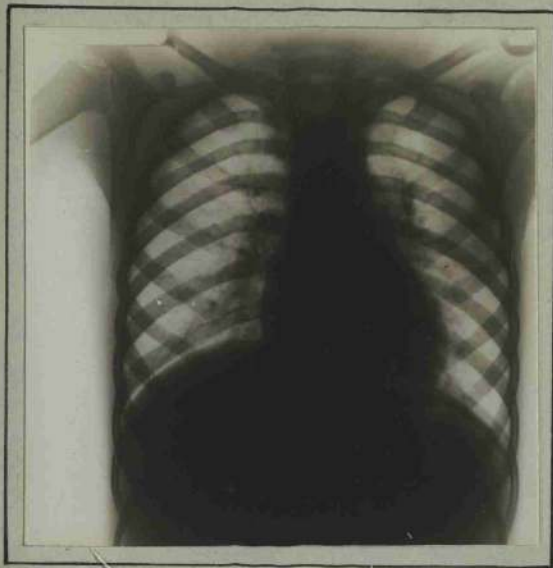


Plate 36 c. At One Year.

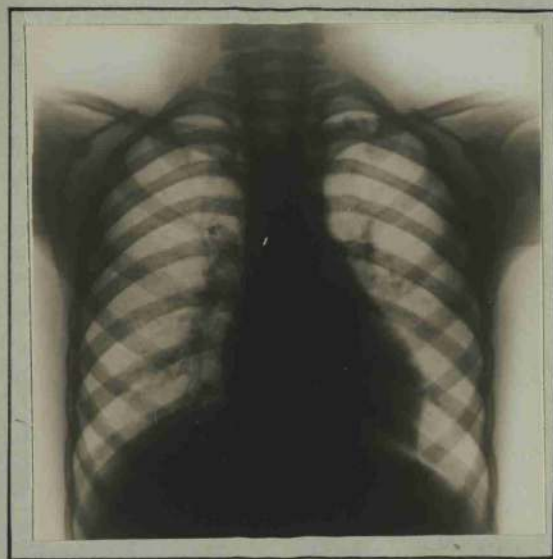


Plate 36 d. At Eighteen Months.

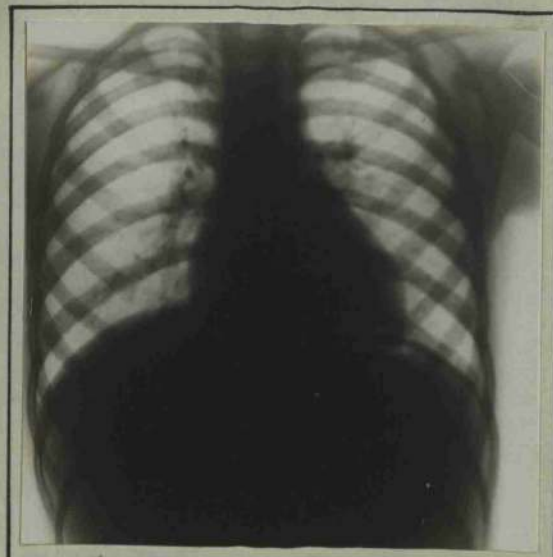


Plate 36 e. At Two Years.

Name. M.McM. Sex. Female. Age. 6 years 11 months.

Date of Birth. 16/7/37.

Feeding. Cow's milk (not boiled) as mother was very ill after confinement and was unable to breast feed.

Family History. Parents are alive and well. Only child.
No family history of tuberculosis

Previous Illnesses

Chickenpox	February, 1943.
Whooping cough	April, 1943.
Tonsillitis	February, 1944.
Measles	June, 1944.

Environment and Parental Care. The family resides in a bungalow on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

June, 1944.

(6 years 11 months)

Height and Weight. 46.5 inches. 40 pounds.

Mouth and Teeth: Tongue moist and clean. One decayed tooth (5) in lower jaw, remainder in good condition.

Teeth in upper jaw:	6543-1	1-3456
Teeth in lower jaw:	6--321	123-56
Total number of teeth:	19	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Slight enlargement of tonsils and adenoids.

Naso-faucial Flora. Mainly M.catarrhalis, staphylococci and pneumococci.

Haematology.

Erythrocytes	4,810,000 per c.mm.
Leucocytes	9,000 per c.mm.
Haemoglobin 85 per cent.	Colour Index 0.88

Differential Leucocyte Count:-

Neutrophils	45.00 per cent.	(4,050 per c.mm.)
Eosinophils	5.25 per cent.	(472 per c.mm.)
Basophils	0.75 per cent.	(67 per c.mm.)
Lymphocytes	43.75 per cent.	(3,937 per c.mm.)
Monocytes	5.25 per cent.	(472 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	20	37	37	6	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 20 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign:

The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 37. 'Well formed chest, broad and symmetrical. Heart normal.'

Right lung: Increased root shadow at upper pole and extending along lower lobe bronchi where glands are seen. Some basal striation.

Left lung: Mass of glands in left upper root shadow; slight increase in striation generally.

Lateral view shows increase in posterior basal branches of lower lobe bronchi.'

SUBSEQUENT EXAMINATIONS

In August the child had a cough for ten days, especially after lying down in bed at night.

At Three Months (September, 1944)

(7 years 2 months)

Height and Weight. 47.25 inches (increase of 0.75 inch).
44 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 37 a. 'No reduction in extent of root shadow, but the quality has improved slightly and it is harder, showing less congestion. Lung striation remains the same in amount.'

Lateral view shows little change.'

In October the child had a cough for two weeks, especially after lying down in bed at night.

At Six Months (December, 1944)

(7 years 5 months)

Height and Weight. 48 inches (increase of 0.75 inch).
44 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was present.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 37 b. 'No great change in size of root shadow, but definite improvement in quality of outline.'

Lateral view confirms hardening of root shadow generally.'

In January the child had mumps and in February she had a nasal catarrh with cough, which lasted for ten days. Since then she has had frequent nasal catarrh but no cough.

At One Year (June, 1945)

(7 years 11 months)

Height and Weight. 48.5 inches (increase of 0.5 inch).
45 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion no abnormality was detected. Breath sounds harsh, especially over right side of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 37 c. 'When compared with film of one year ago the root shadows show a slight increase in fuzziness, and the lung striation is slightly more prominent throughout. The glands along the right lower lobe bronchi are less well defined. Generally there appears to be an increased congestion around glands and bronchi.'

This shows also in the lateral view.'

Since the end of October the child has suffered from frequent nasal catarrh.

At Eighteen Months (December, 1945)

(8 years 5 months)

Height and Weight. 49.5 inches (increase of 1 inch).
49 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. Slight dullness over upper part of sternum. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. The child has had a cough for a week, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 37 d. 'The root shadows remain much the same in extent as compared with six months ago, but there is an improvement in quality. In particular the glands of the right upper lobe bronchi, the right basal bronchus and the left upper lobe bronchus show definite firming and calcification.'

Lateral view not so distinct.'

In February the child had tonsillitis, but since then she has remained well, except for occasional nasal catarrh.

At Two Years (June, 1946)

(8 years 11 months)

Height and Weight. 50.25 inches (increase of 0.75 inch).
49 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

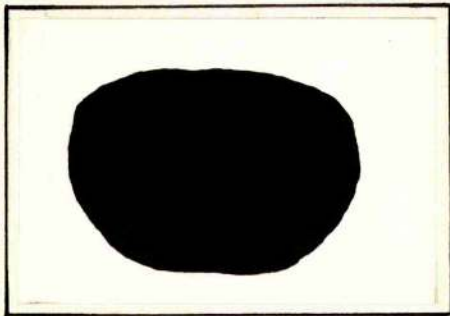
Plate 37 e. 'As compared with six months ago the root shadows have increased in extent and softened in appearance, denoting the reappearance of a congestive process. This is especially marked along left upper lobe bronchus.

Lateral view shows little change.

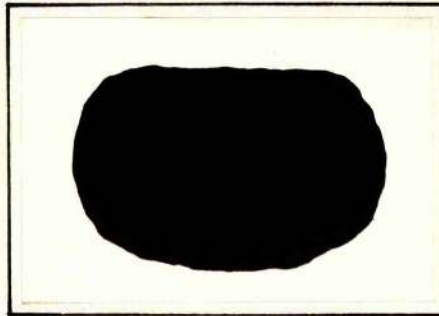
As compared with two years ago and allowing for natural growth the root shadows show practically no change. They remain diffuse and soft. The only definite improvement noted is the hardening of gland shadows along right lower lobe bronchi.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 37.At First Examination

A-P. diameter 5.00 inches. L. diameter 7.00 inches.

Fig. 37 a.At Two Years

A-P. diameter 5.00 inches. L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

20 inches.

22 inches.

(Female. 6 years 11 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Cotton	Knickers	Silk
Knickers	Wool		
Shoes and socks.		Shoes and socks.	

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Frock	Velvet	Frock	Cotton
Cardigan	Wool		
Coat	Fur		
Scarf	Wool		
Hat.		Hat.	

Overclothed:

No.

Constriction of chest due to clothing:

None.

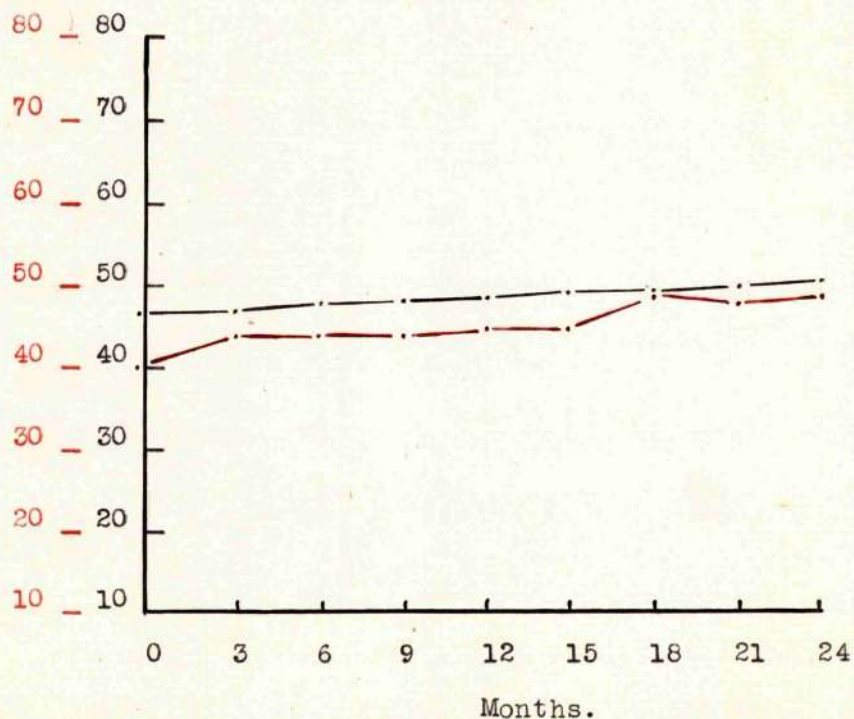
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



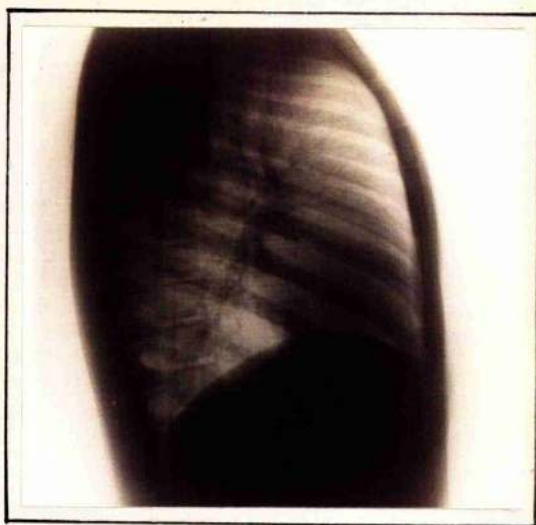
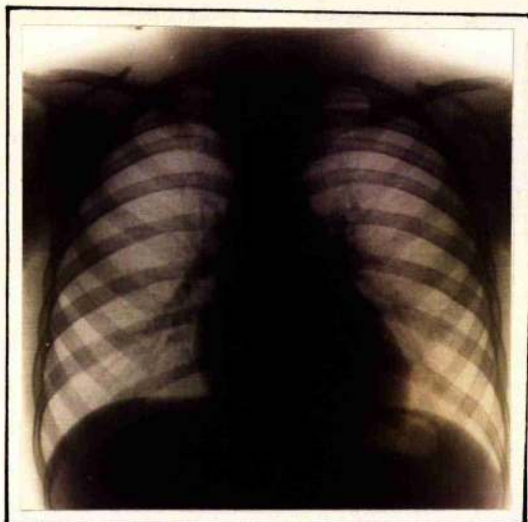


Plate 37. At First Examination.

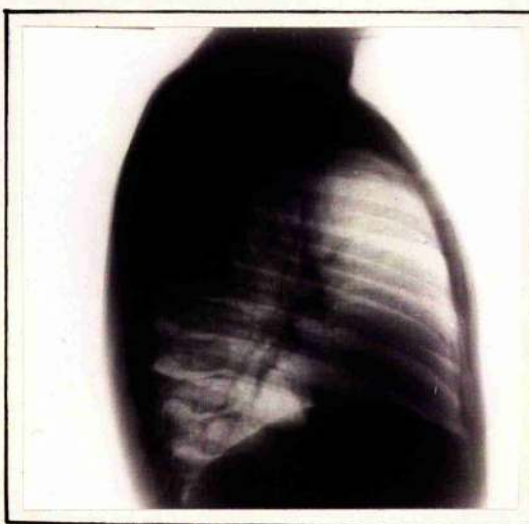
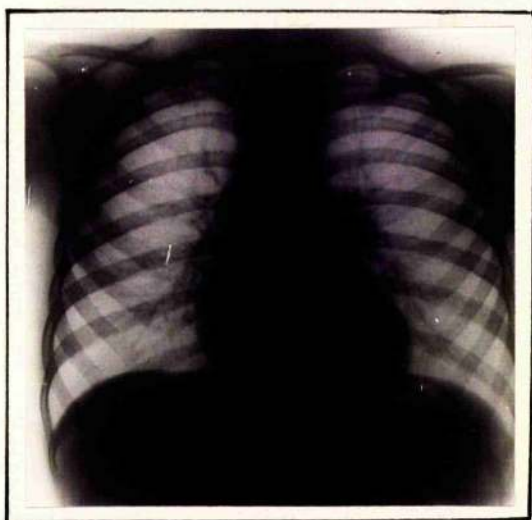


Plate 37 a. At Three Months.

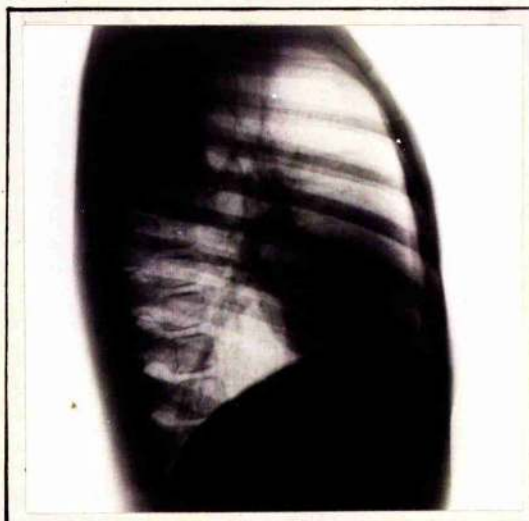
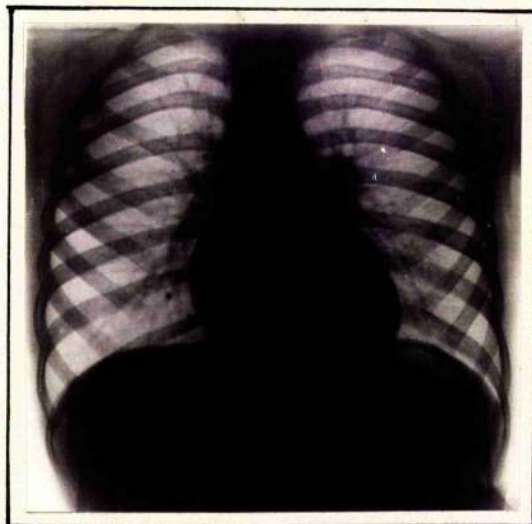


Plate 37 b. At Six Months.

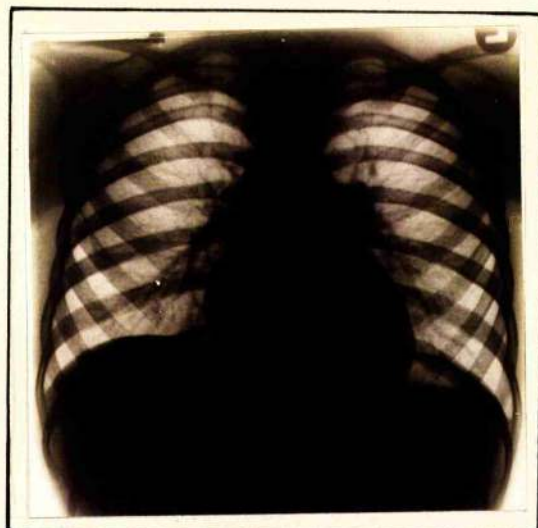


Plate 37 c. At One Year.

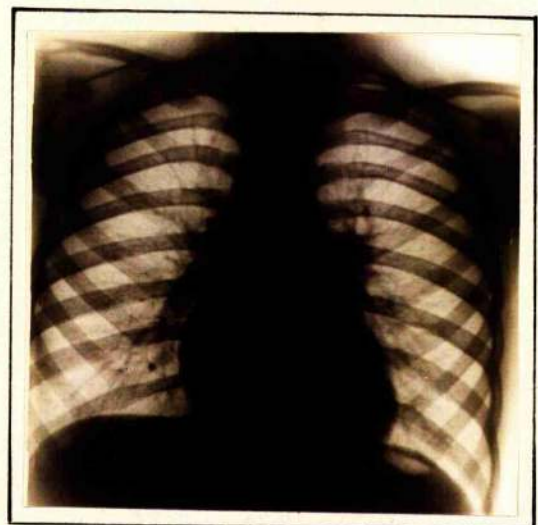


Plate 37 d. At Eighteen Months.

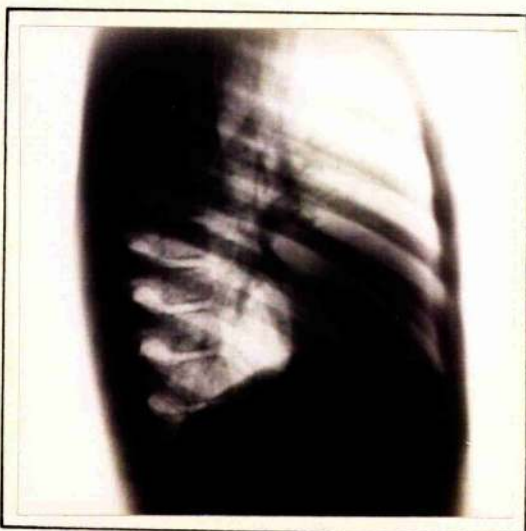
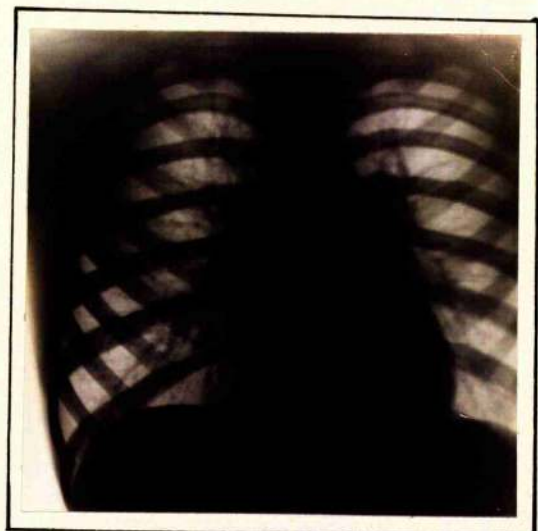


Plate 37 e. At Two Years.

Name. C.M. Sex. Male. Age. 6 years.

Date of Birth. 10/8/38.

Feeding. At breast for one month and thereafter fed on Ostermilk when lactation stopped.

Family History. Parents are alive and well. One brother aged eight years is healthy. Two sisters, one aged one year six months is healthy and the other aged seven years has whooping cough (Case 15). No family history of tuberculosis.

Previous Illnesses

Chickenpox November, 1941.
Measles July, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

August, 1944.

(6 years)

Height and Weight. 41 inches. 30 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 54321 12345
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci and diphtheroid types.

Haematology.

Erythrocytes 5,460,000 per c.mm.
Leucocytes 8,266 per c.mm.
Haemoglobin 85 per cent. Colour Index 0.78

Differential Leucocyte Count:-

Neutrophils 48.75 per cent. (4,033 per c.mm.)
Eosinophils 2.50 per cent. (206 per c.mm.)
Basophils 1.25 per cent. (103 per c.mm.)
Lymphocytes 43.25 per cent. (3,575 per c.mm.)
Monocytes 4.25 per cent. (351 per c.mm.)

Arneeth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	16	32	49	3	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 21 inches. Antero-posterior diameter 5 inches. Lateral diameter 7 inches. Skin texture fine. Prominence of anterior superficial veins over upper part of chest. No enlarged glands. Slight dullness over first and second thoracic spines. Breath sounds vesicular and harsh exp-

esially over right half of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 38. 'Broad symmetrical chest. Heart normal in shape.

Right lung: Diffuse enlargement of root shadow with glandular masses showing in all parts, particularly in upper half, tracheal, tracheo-bronchial and upper bronchial. Generalised increase of lung striation.

Left lung: Similarly diffuse root shadow with upper bronchial glands prominent. Increase of lung striation not so marked as on right.

Lateral view shows striation generally increased.'

SUBSEQUENT EXAMINATIONS

In September the child had mumps.

At Three Months (November, 1944)

(6 years 3 months)

Height and Weight. 41.25 inches (increase of 0.25 inch).
35.5 pounds (gain of 5.5 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 38 a. 'Slight qualitative improvement in root shadow. Lung striation is if anything more pronounced and softer in appearance.

Lateral view suggests a greater degree of clearing of the root shadow, which is less diffuse and showing signs of hardening.'

At Six Months (February, 1945)

(6 years 6 months)

Height and Weight. 41.75 inches (increase of 0.5 inch).
35 pounds (loss of 0.5 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of chest much less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings.

Plate 38 b. 'Marked diminution in root and peribronchial congestion generally in both antero-posterior and lateral views.'

At One Year (August, 1945)

(7 years)

Height and Weight. 43.25 inches (increase of 1.5 inches).
36 pounds (gain of 1 pound).

Physical Examination of Chest. Only very slight prominence of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 38 c. 'Little change noted in antero-posterior view. Root and peribronchial congestion remain to same extent as in February, 1945. No change noted in lateral view.'

At Eighteen Months (February, 1946)

(7 years 6 months)

Height and Weight. 43.75 inches (increase of 0.5 inch).
40 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 38 d. 'Little change noted in the last six months either in the antero-posterior or lateral views.'

At Two Years (August, 1946)

(8 years)

Height and Weight. 44.50 inches (increase of 0.75 inch).
41 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 38 e. 'There is now a diminution in the generalised peribronchial congestion noted in February, 1946, though the

root region shows little change. Lateral view shows diminished congestion.

Compared with two years ago the root shadows remain diffusely enlarged and show slightly more peribronchial congestion, in which the various glands share. Lateral view, however, shows glands throughout to be smaller and firmer.'

CYRTOMETER TRACINGS

(one quarter natural size)

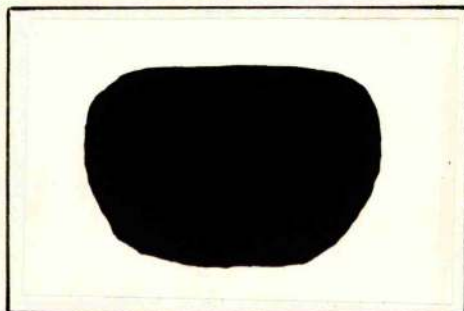


Fig. 38.

At First Examination

A-P. diameter 5.00 inches .

L. diameter 7.00 inches..

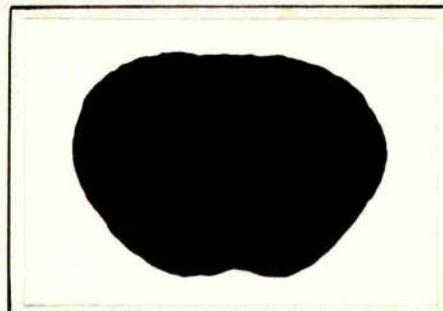


Fig. 38 a.

At Two Years

A-P. diameter 5.25 inches.

L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

21.0 inches.

22.5 inches.

(Male. 6 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and stockings.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Pullover	Wool	Trousers	Tweed
Trousers	Tweed		
Jerkin	Leather		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

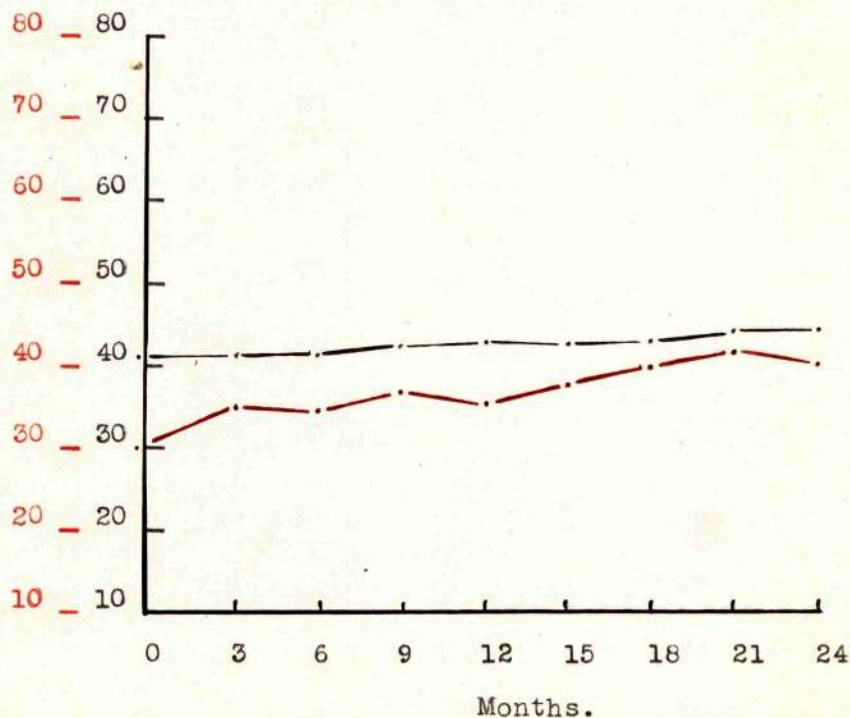
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



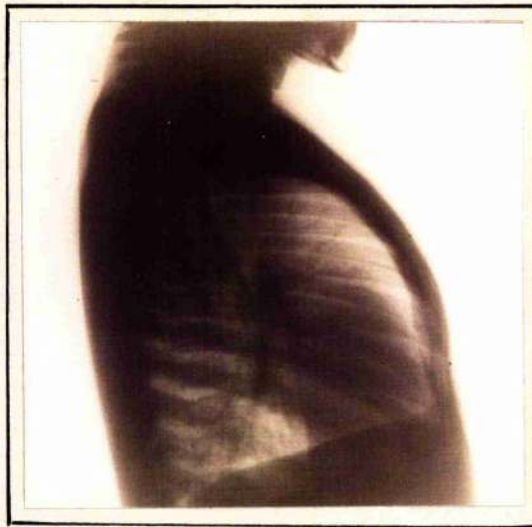
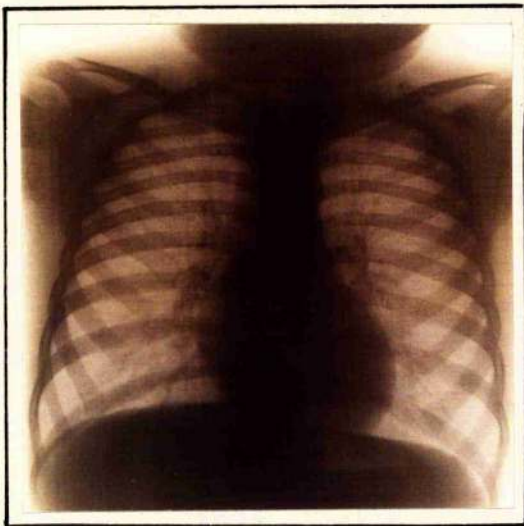


Plate 38. At First Examination.

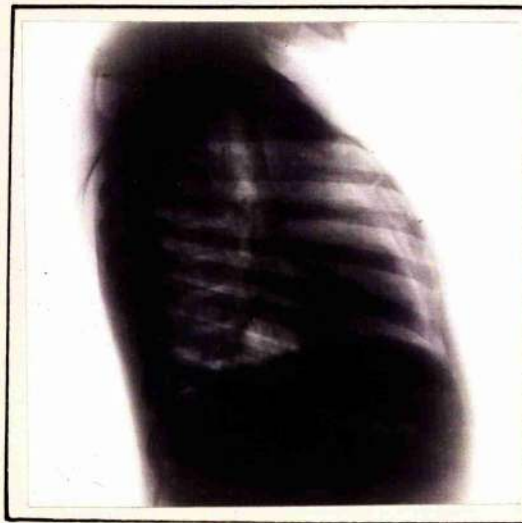
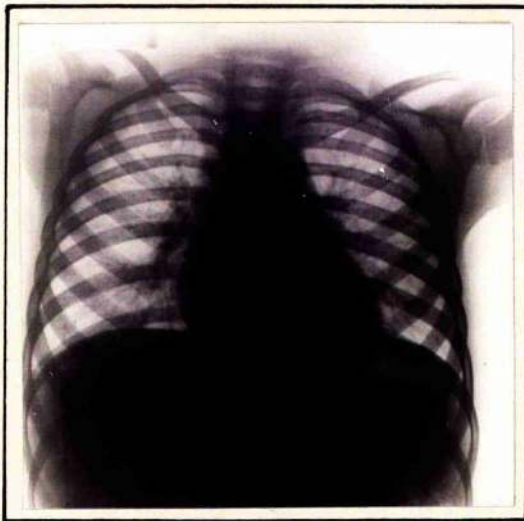


Plate 38 a. At Three Months.

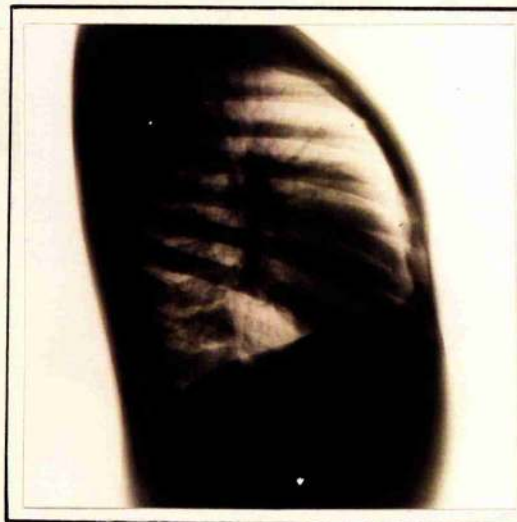
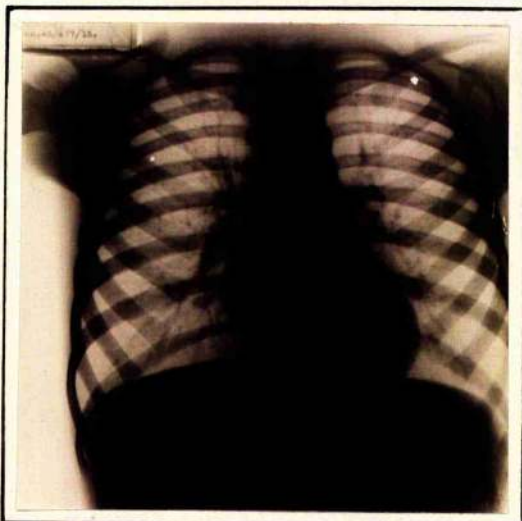


Plate 38 b. At Six Months.

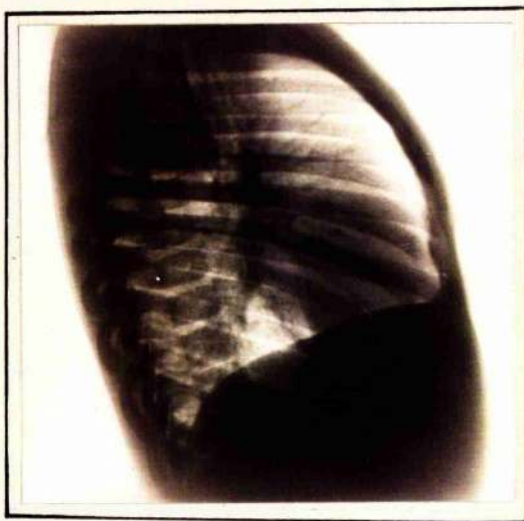
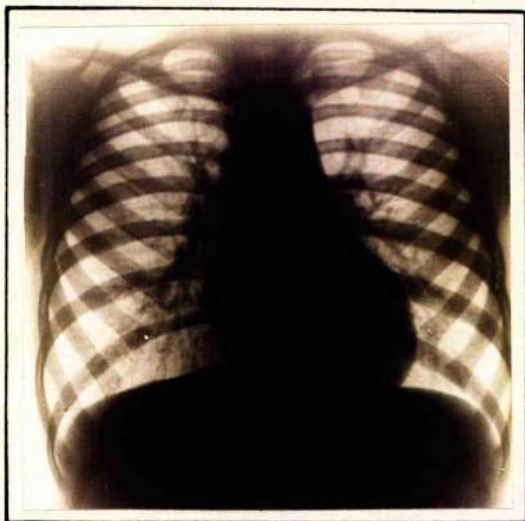


Plate 38 c. At One Year.

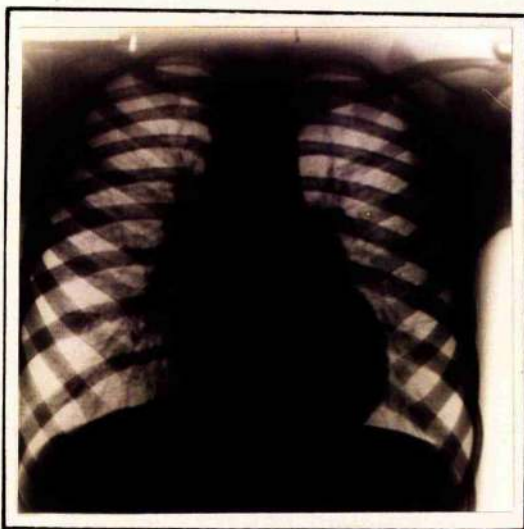


Plate 38 d. At Eighteen Months.

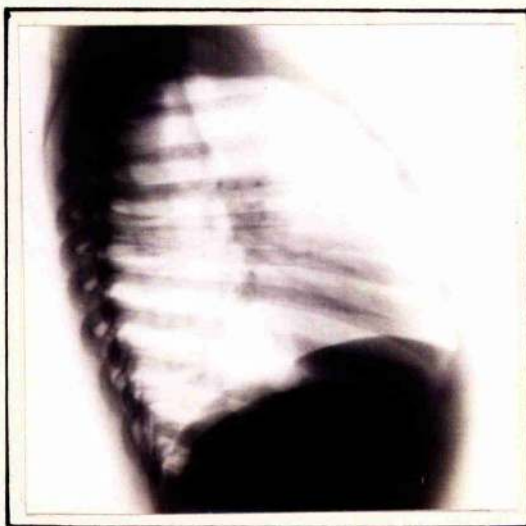


Plate 38 e. At Two Years.

Name. J.G. Sex. Male. Age. 7 years.

Date of Birth. 22/9/37.

Feeding. At breast for one week and thereafter fed on Sister Laura's Food when lactation stopped.

Family History. Mother is alive and well. Father died of pulmonary tuberculosis in 1942 aged fifty seven years. Two brothers aged seventeen and sixteen years healthy. One brother died of measles and pneumonia in 1929 aged ten months. Three sisters aged twenty three, twenty one and nineteen years healthy.

Previous Illnesses

Previous health good.
Measles September, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(7 years)

Height and Weight. 49.25 inches. 56 pounds.

Mouth and Teeth. Tongue moist and clean. Decayed teeth have been removed except (4) in upper jaw. Remainder in good condition.

Teeth in upper jaw: 65432- -23456
Teeth in lower jaw: 6-4321 123-56
Total number of teeth: 20

Ear, Nose and Throat. Ears healthy. Slight nasal discharge. Tonsils and adenoids enlarged.

Naso-facial Flora. Mainly *Micetarrhalis*, staphylococci (*aureus*), pneumococci and streptococci including haemolytic strains.

Haematology.

Erythrocytes 4,830,000 per c.mm.
Leucocytes 11,200 per c.mm.
Haemoglobin 92 per cent. Colour Index 0.95

Differential Leucocyte Count:-

Neutrophils 68.50 per cent. (7,672 per c.mm.)
Eosinophils 4.00 per cent. (448 per c.mm.)
Basophils 0.25 per cent. (28 per c.mm.)
Lymphocytes 22.75 per cent. (2,548 per c.mm.)
Monocytes 4.50 per cent. (504 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	14	50	34	2	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of

chest during quiet respiration 24 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 8.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Slight dullness over first and second dorsal vertebrae. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings.

Plate 39. 'Chest well formed and symmetrical. Heart normal. Generalised increase of lung striation throughout both lung fields. Soft enlargement of root shadows with enlargement of tracheo-bronchial glands on both sides.

Lateral view shows exaggeration of upper lobe bronchial tree and also anterior basal bronchioles. Numerous small glands along basal bronchioles.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(7 years 3 months)

Height and Weight. 50 inches (increase of 0.75 inch). 60 pounds (gain of 4 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over right side of chest extending to right shoulder. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 39 a. 'Definite improvement in both quality and quantity of root shadow. Some increase of bronchial shadow into right base remains.

Lateral view also shows improvement.'

At Six Months (April, 1945)

(7 years 6 months)

Height and Weight. 50.5 inches (increase of 0.5 inch). 62 pounds (gain of 2 pounds).

Physical Examination of Chest. Anterior superficial veins less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 39 b. 'Root shadow remains unchanged. Increase in peribronchial congestion into right basal zone and left upper

zone.'

At One Year (October, 1945)

(8 years)

Height and Weight. 51.5 inches (increase of 1 inch).
63 pounds (gain of 1 pound).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (bovine) was positive. Vollmer (human) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 39 c. 'As compared with six months ago there is no change quantitatively. There is, however, a slight but definite generalised improvement qualitatively.

Lateral view shows more markedly the qualitative improvement in root shadow and lung striation.'

In November the child had his tonsils and adenoids removed.

At Eighteen Months (April, 1946)

(8 years 6 months)

Height and Weight. 52.5 inches (increase of 1 inch).
70 pounds (gain of 7 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 39 d. 'As compared with film of six months ago, the present film shows an increase in the amount of peribronchial congestion, especially in the right basal zone. The root shadows on the right remain unchanged, but on the left there is some diminution in extent and improvement in quality with firming of the glands of the mid-bronchial group.

Lateral view shows improved definition of glandular shadows generally.'

At Two Years (October, 1946)

(9 years)

Height and Weight. 53.25 inches (increase of 0.75 inch).
68 pounds (loss of 2 pounds).

Physical Examination of Chest. Anterior superficial veins over right side of chest prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh

cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 39 e. 'The root shadows remain as diffuse as they were two years ago. There has been, however, a definite firming and hardening of the right mid-bronchial glands and those along the left upper lobe bronchi - these latter showing definite calcification. There is still an increase in the vascular markings leading into the left upper lobe.

There is slightly less peribronchial congestion generally than was noted six months ago.

Lateral view confirms the firmer gland masses, some dense enough to suggest calcification.'

CYRTOMETER TRACINGS

(one quarter natural size)

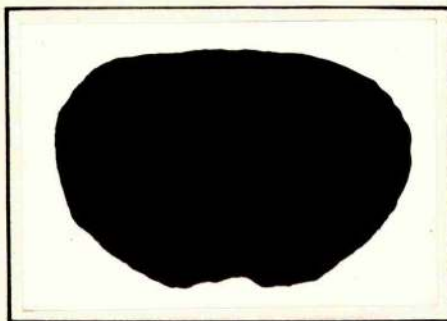


Fig. 39

At First Examination

A-P. diameter 5.50 inches.

L. diameter 8.50 inches.

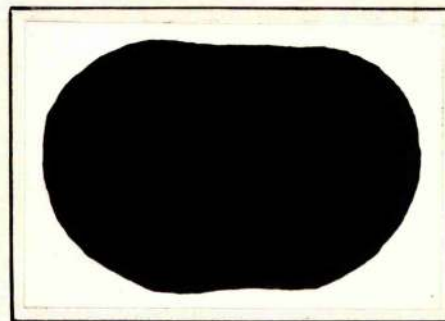


Fig. 39 a.

At Two Years.

A-P. diameter 6.00 inches.

L. diameter 9.00 inches.

Circumference of Chest During Quiet Respiration

24.00 inches.

26.50 inches.

(Male. 7 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Vest	Wool		

Boots and stockings.

Shoes and stockings.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Trousers	Flannel	Trousers	Flannel
Vest	Flannel	Pullover	Wool
Jacket	Flannel		
Coat	Tweed		
Scarf	Wool		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

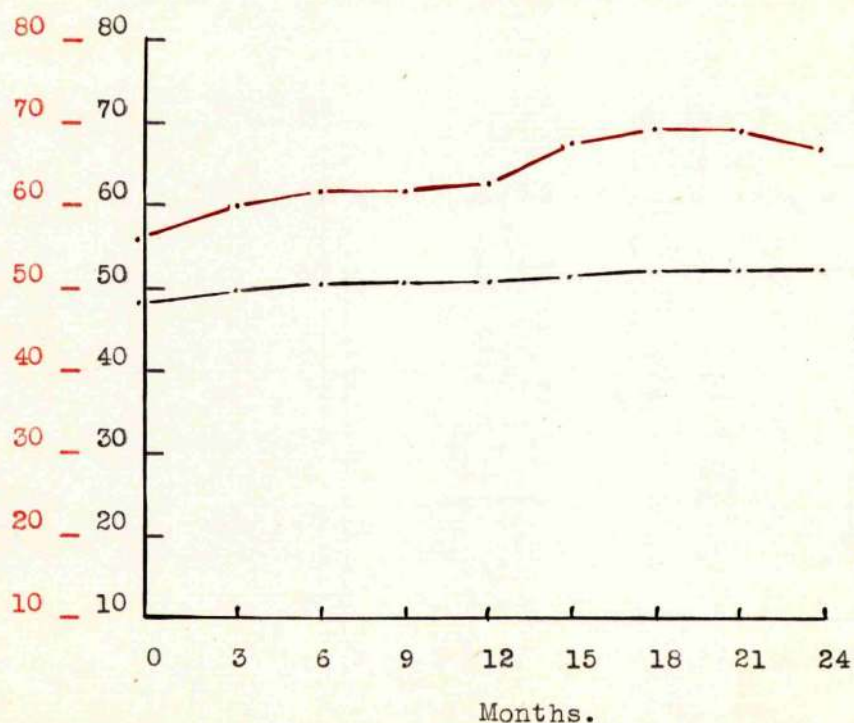
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



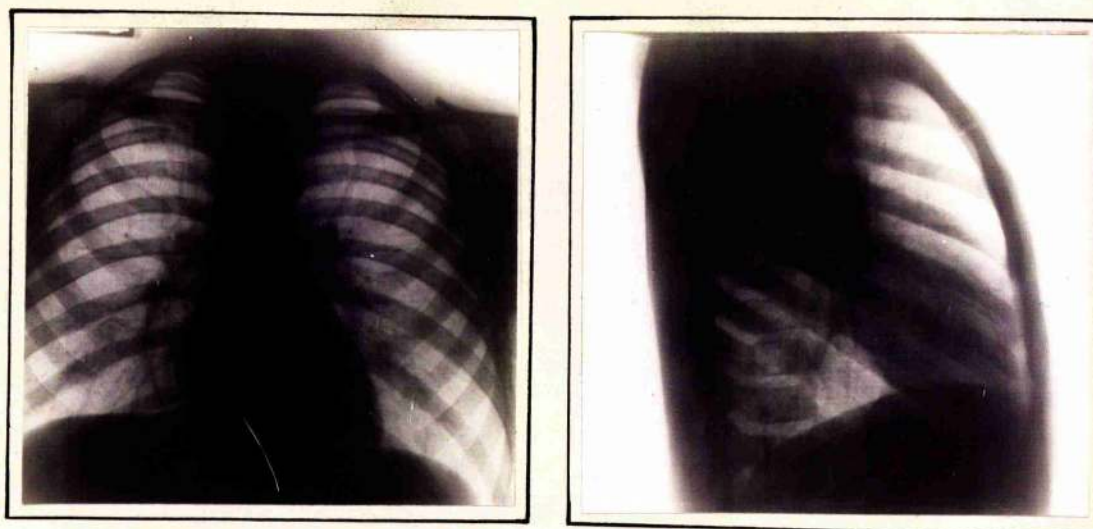


Plate 39. At First Examination.

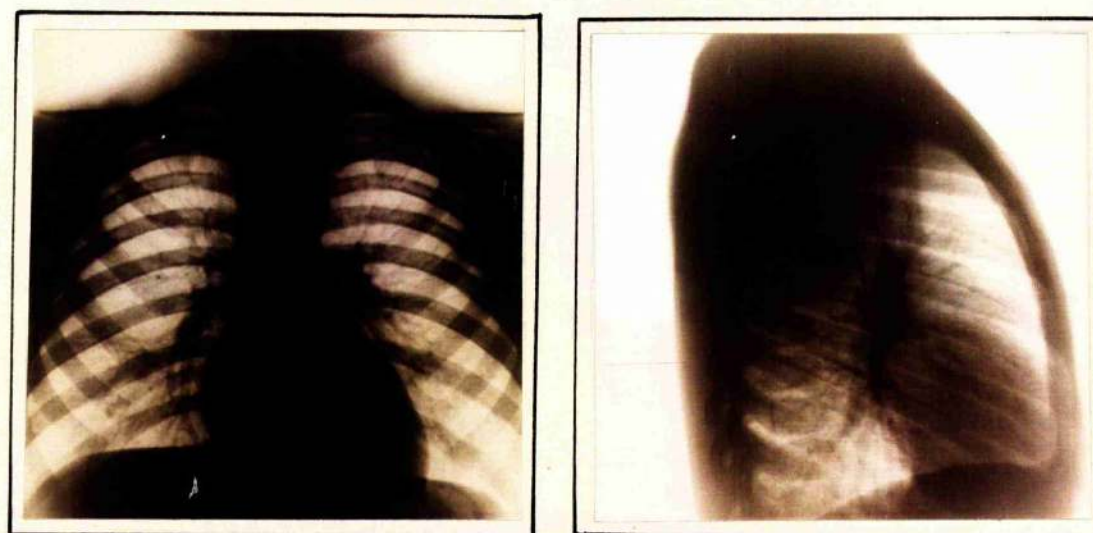


Plate 39 a. At Three Months.

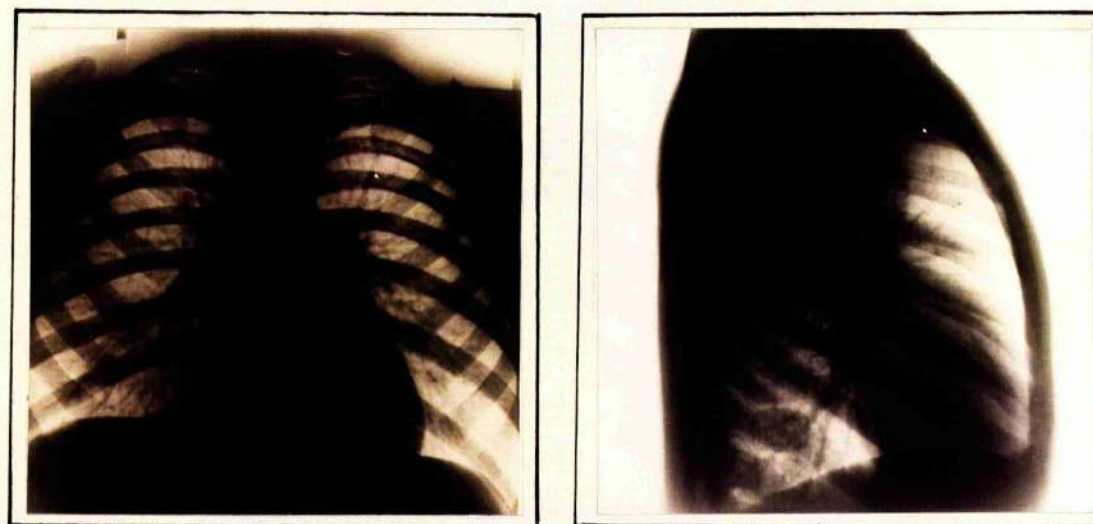


Plate 39 b. At Six Months.

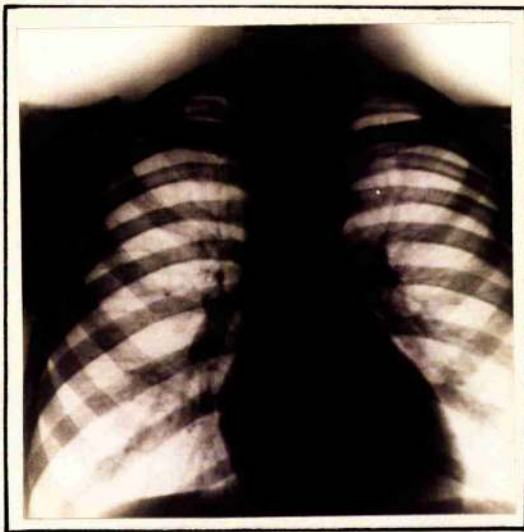


Plate 39 c. At One Year.

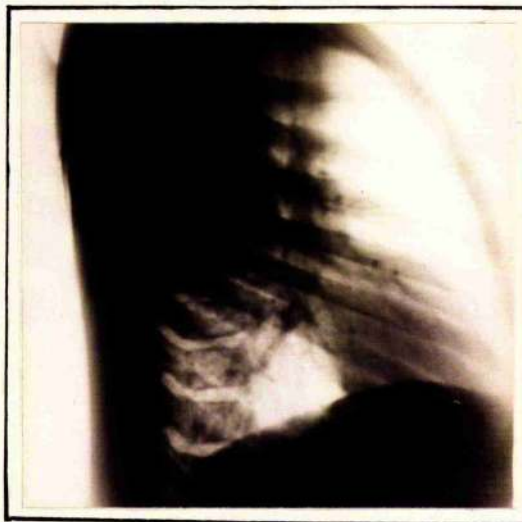


Plate 39 d. At Eighteen Months.

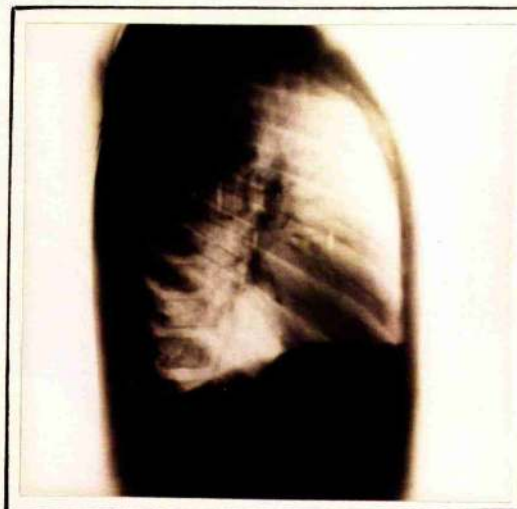
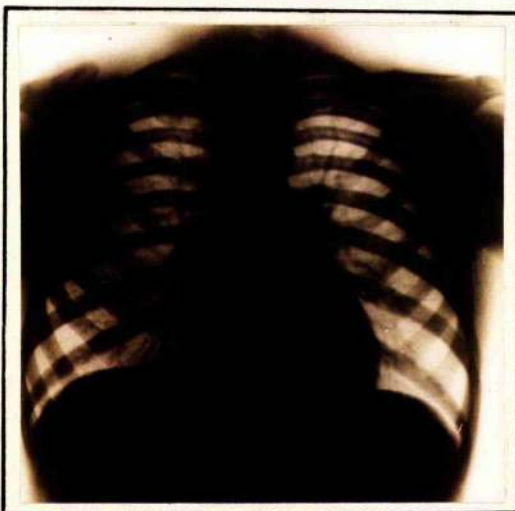


Plate 39 e. At Two Years.

Name. W.C. : Sex. Male. Age. 5 years 6 months.

Date of Birth. 15/4/39.

Feeding. At breast for two weeks and thereafter fed on Sister Laura's Food when lactation stopped.

Family History. Parents are alive and well. Mother suffered from tuberculous hip joint disease in 1920, when she was nine-teen years of age. One sister aged three years three months has measles (Case 42).

Previous Illnesses

Broncho-pneumonia April, 1941.
Measles September, 1944.

Environment and Parental Care. The family resides in a two apartment house in the centre of a town. The windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(5 years 6 months)

Height and Weight. 46 inches. 40.5 pounds.

Mouth and Teeth. Tongue moist and clean. Decayed teeth have been extracted, remainder in good condition.

Teeth in upper jaw: 6--321 123--6
Teeth in lower jaw: 6-4321 1234-6
Total number of teeth: 18

Ear, Nose and Throat. Ears healthy. No nasal discharge. No enlargement of tonsils or adenoids.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci (*aureus*) and streptococci including haemolytic strains.

Haematology.

Erythrocytes 5,250,000 per c.mm.
Leucocytes 6,644 per c.mm.
Haemoglobin 84 per cent. Colour Index 0.80

Differential Leucocyte Count:-

Neutrophils 56.00 per cent. (3,720 per c.mm.)
Eosinophils 2.50 per cent. (166 per c.mm.)
Basophils 1.00 per cent. (66 per c.mm.)
Lymphocytes 35.50 per cent. (2,358 per c.mm.)
Monocytes 5.00 per cent. (322 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	20	46	30	4	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. Slight scoliosis to right. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 4.5 inches. Lateral diameter 7.5 inches. Skin texture fine. Slight enlargement of anterior superficial

veins over upper part of right side of chest. Enlarged glands on both sides of neck in posterior triangle. Slight dullness between first and second dorsal vertebrae. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 40. 'Chest well made and symmetrical. Heart normal in size.

Right lung: Root moderately enlarged, with enlargement of tracheo-bronchial gland groups. Some slight increase of lung striation, more prominent into basal zones.

Left lung: Moderate enlargement of upper bronchial glands with slight exaggeration of upper lobe bronchi.

Lateral view shows enlargement of tracheo-bronchial glands and bronchial glands. Exaggeration of upper lobe bronchi and posterior basal bronchi.'

SUBSEQUENT EXAMINATIONS

In December the child had a cough for ten days, especially after lying down in bed at night.

At Three Months (January, 1945)

(5 years 9 months)

Height and Weight. 46.5 inches (increase of 0.5 inch). 43 pounds (gain of 2.5 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over upper part of right side of chest less. Glands smaller on right side of neck. Slight dullness between first and second dorsal vertebrae. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 40 a. 'Root congestion more pronounced than in previous film. Small shadow at right apex? primary focus of tuberculosis.

Lateral view confirms alteration in character of root shadows.

At Six Months (April, 1945)

(6 years)

Height and Weight. 47.25 inches (increase of 0.75 inch). 43 pounds (no gain).

Physical Examination of Chest. Anterior superficial veins less prominent. Adenitis of neck unchanged. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 40 b. 'There is a slightly better definition of the individual glands. Apart from that, the root shadow appears the same in quantity and quality as it did six months ago. So too do the lung fields.'

Lateral view confirms better definition of gland shadows.'

At One Year (October, 1945)

(6 years 6 months)

Height and Weight. 48.25 inches (increase of 1 inch).
47 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. No glands. Slight dullness left infraclavicular area. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 40 c. 'Definite improvement quantitatively and qualitatively in the root shadows, particularly of right, mid and upper and left upper bronchial groups. There is also less right basal striation.'

Lateral view confirms improvement in right root shadow and lung towards right base.'

In March the child had a cough for ten days, especially after lying down in bed at night.

At Eighteen Months (April, 1946)

(7 years)

Height and Weight. 49.5 inches (increase of 1.25 inches).
49 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 40 d. 'Peri-adenitis still marked, right and left, but in the gland masses the individual glands are becoming more defined, especially in right mid and left upper bronchial groups. Lateral view confirms hardening of individual gland shadows.'

At Two Years (October, 1946)

(7 years 6 months)

Height and Weight. 50.50 inches (increase of 1 inch).
51 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no ab-

normality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 40 e. 'As compared with the film of two years ago the present one shows very little change in the quality or the quantity of the root shadow, save for hardening and apparent calcification of the glands along the right upper lobe bronchus.

This firming of right upper lobe bronchial glands has materially increased during the last six months.

Lateral view shows that congestion remains almost unchanged with that of two years and of six months ago.'

CYRTOMETER TRACINGS

(one quarter natural size)

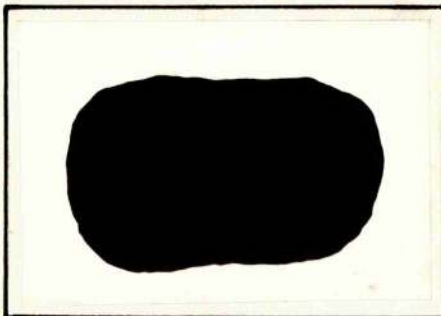


Fig. 40.

At First Examination.

A-P. diameter 4.50 inches . A-P. diameter 5.00 inches.
L. diameter 7.50 inches . L. diameter 8.00 inches.

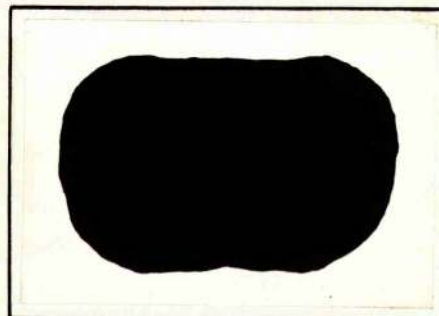


Fig. 40 a.

At Two Years.

Circumference of Chest During Quiet Respiration.

21.50 inches.

23.50 inches.

(Male. 5 years 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and stockings.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Pullover	Wool	Trousers	Flannel
Trousers	Tweed		
Jacket	Tweed		
Coat	Tweed		
Scarf	Wool		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

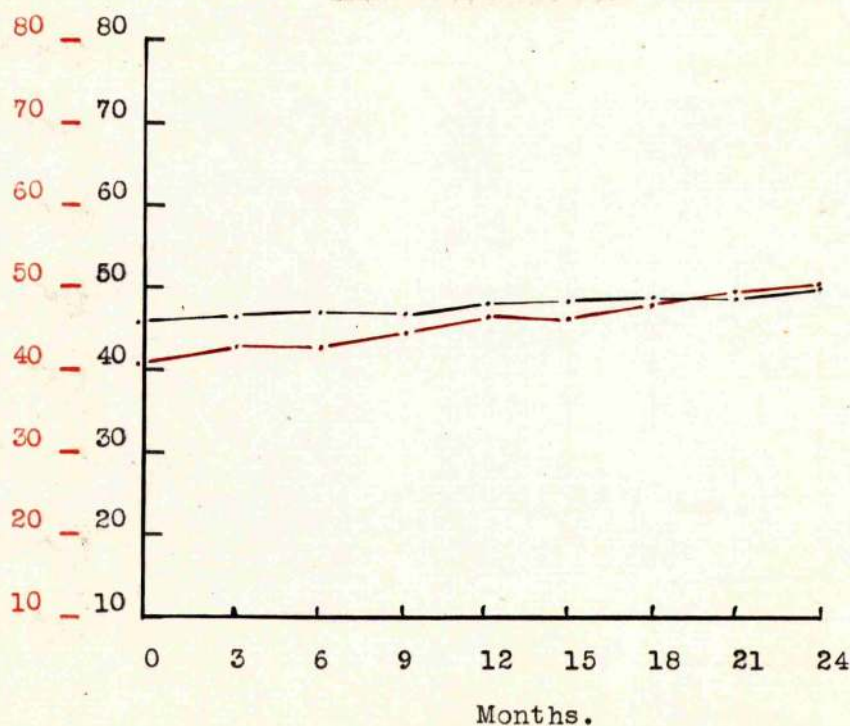
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



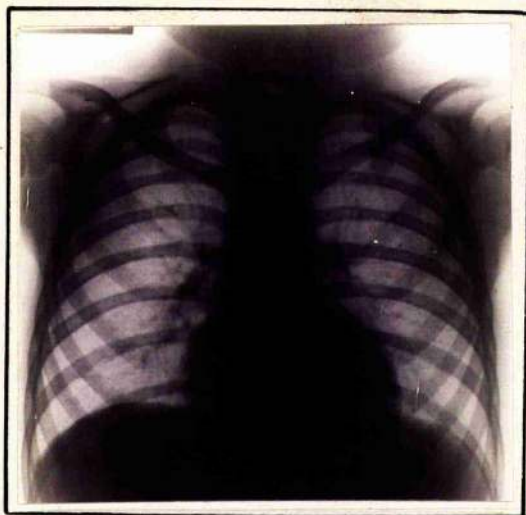


Plate 40. At First Examination.

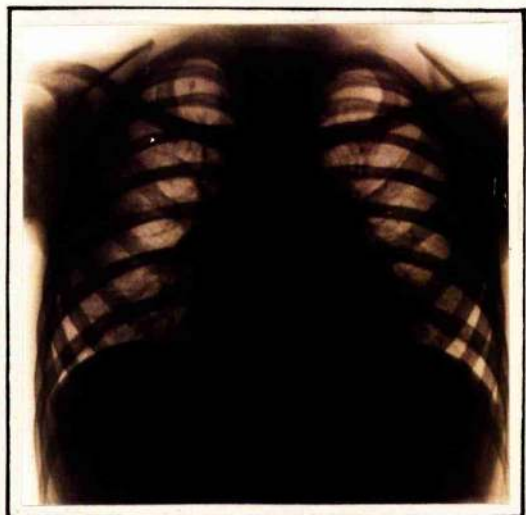


Plate 40 a. At Three Months.

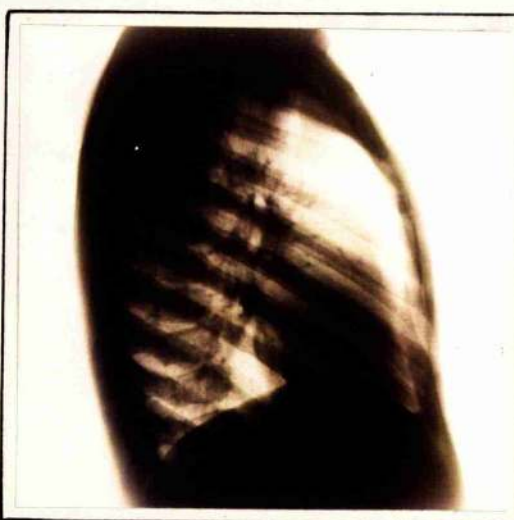
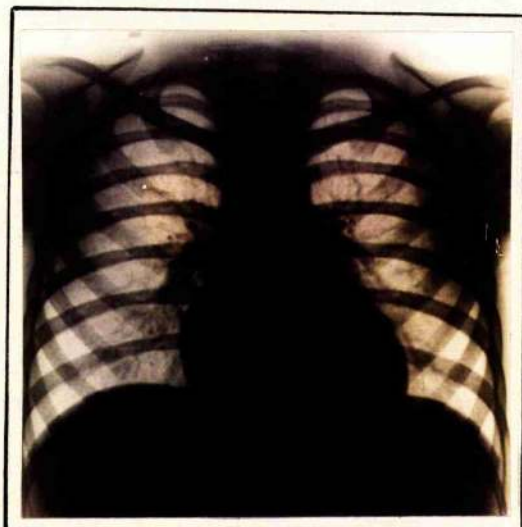


Plate 40 b. At Six Months.

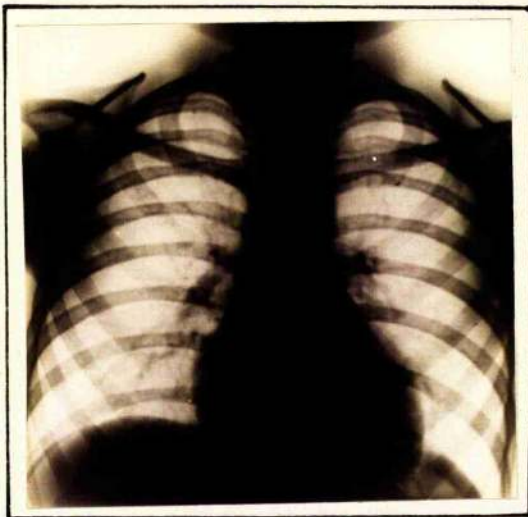


Plate 40 c. At One Year.

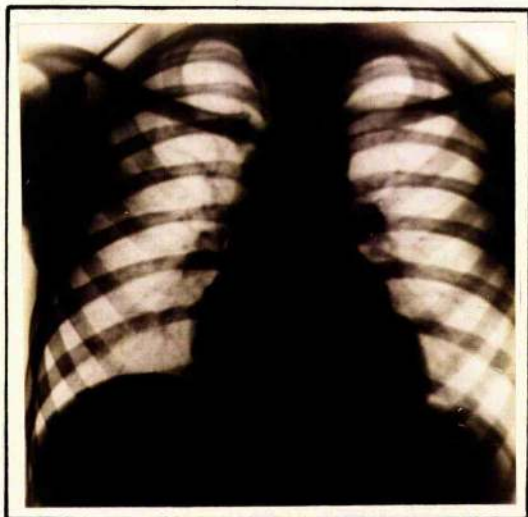


Plate 40 d. At Eighteen Months.

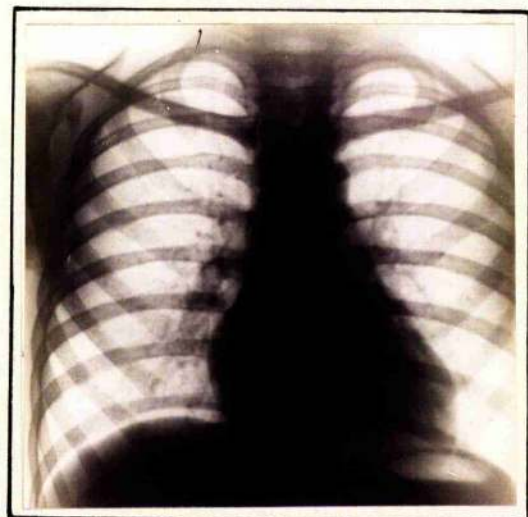


Plate 40 e. At Two Years.

Name. B.M. Sex. Female. Age. 1 year 8 months.

Date of Birth. 16/2/43.

Feeding. At breast for two weeks and thereafter fed on Ostermilk when lactation stopped.

Family History. Parents are alive and well. Two brothers aged eight and six years are healthy. One sister aged seven years is healthy. No family history of tuberculosis.

Previous Illnesses

Previous health good.

Measles complicated
by broncho-pneumonia August, 1944.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION.

October, 1944.

(1 year 8 months)

Height and Weight. 28.5 inches. 17 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in good condition.

Teeth in upper jaw: 4-21 12-4
Teeth in lower jaw: 4-21 12-4
Total number of teeth: 12

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci (*aureus*), pneumococci and streptococci.

Haematology.

Erythrocytes 5,260,000 per c.mm.
Leucocytes 20,111 per c.mm.
Haemoglobin 90 per cent. Colour Index 0.86

Differential Leucocyte Count:-

Neutrophils 48.50 per cent. (9,753 per c.mm.)
Eosinophils 6.25 per cent. (1,256 per c.mm.)
Basophils 0.50 per cent. (100 per c.mm.)
Lymphocytes 41.50 per cent. (8,346 per c.mm.)
Monocytes 3.25 per cent. (653 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	22	40	33	5	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 18 inches. Antero-posterior diameter 5 inches. Lateral diameter 5.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds

vesicular. A few scattered moist sounds heard throughout both sides of chest. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 41. 'Small regular chest. Heart within normal limits. The root shadows right and left are diffusely enlarged with bronchial glands prominent on right side and along upper lobe bronchi on left. The lung fields are congested generally.'

SUBSEQUENT EXAMINATIONS

At Three Months (January, 1945)

(1 year 11 months)

Height and Weight. 29.25 inches (increase of 0.75 inch).
18 pounds (gain of 1 pound).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of right side of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Radiographic Findings

Plate 41 a. 'The root shadow is still diffuse but not so pronounced as before. The increase in lung strlation shows a similar slight degree of improvement.'

At Six Months (April, 1945)

(2 years 2 months)

Height and Weight. 30.25 inches (increase of 1 inch).
20 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 41 b. 'A very definite improvement is to be noted when compared with plate of October, 1944, in the appearance of the hilar shadows and lung fields. Right upper and central bronchial glands and those along left upper lobe bronchi are much less diffuse and are showing evidence of firming. There is much less congestion showing in the lung fields.'

At One Year (October, 1946)

(2 years 8 months)

Height and Weight. 32.5 inches (increase of 1.25 inches).
23 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 41 c. 'No appreciable difference to be noted in the last six months.'

In March the child had broncho-pneumonia.

At Eighteen Months (April, 1946)

(3 years 2 months)

Height and Weight. 33.5 inches (increase of 1 inch).
23 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 41 d. 'Root shadows right and left are becoming less extensive and more firm and individual. In particular the right mid-bronchial glands are definitely harder in appearance. Lateral view shows generally small glands becoming more defined in outline.'

At Two Years (October, 1946)

(3 years 8 months)

Height and Weight. 34.25 inches (increase of 0.75 inch).
26 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 41 e. 'The present film shows that the root shadows remain as extensive as before, but with much better definition and less congestion. The glands, especially those along right and left upper lobe bronchi, are small and firm without showing

calcification.

During the past six months there has been firming of the root shadows and of the glandular groups mentioned above.

Lateral view as compared with April, 1946, shows a decided improvement and confirms the firming of the gland shadows.'

CYRTOMETER TRACINGS

(one quarter natural size)

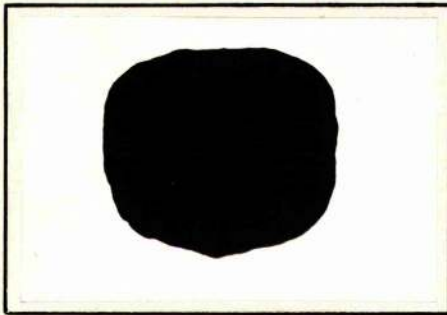


Fig. 41.

At First Examination.

A-P. diameter 5.00 inches. A-P. diameter 5.50 inches.
L. diameter 5.50 inches. L. diameter 6.00 inches.

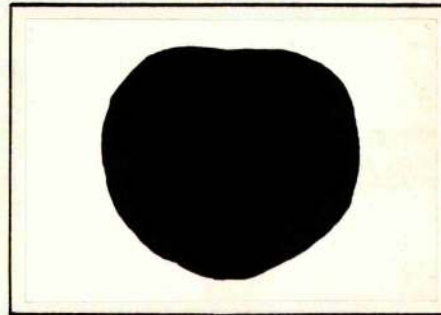


Fig. 41 a.

At Two Years.

Circumference of Chest During Quiet Respiration

18.00 inches.

19.50 inches.

(Female. 1 year 8 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Vest	Cotton	Petticoat	Cotton
Petticoat	Flannel	Knickers	Cotton
Knickers	Cotton		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Frock	Tweed	Frock	Cotton
Coat	Tweed		
Pantaloon	Wool		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

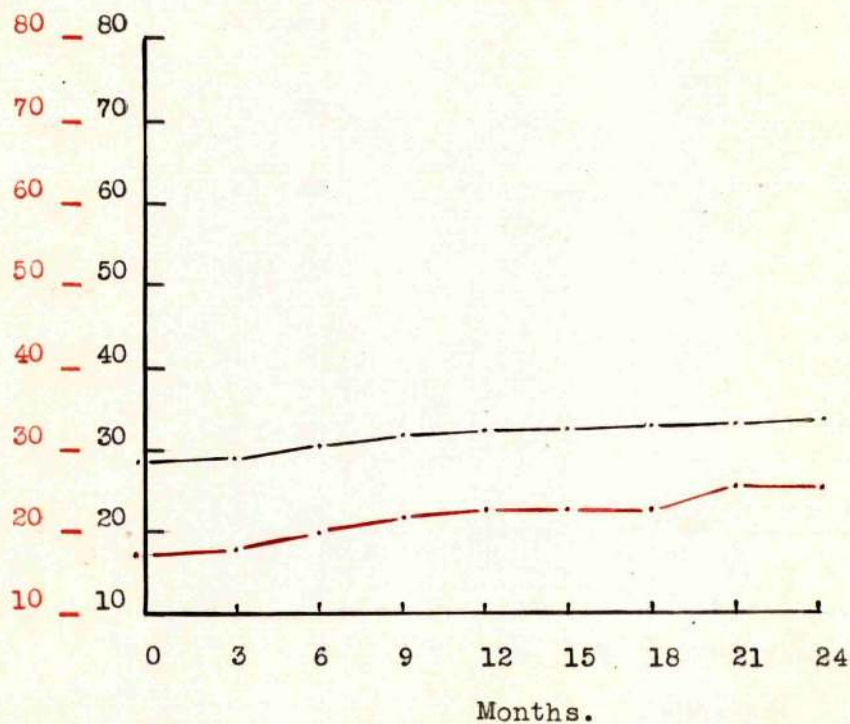
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



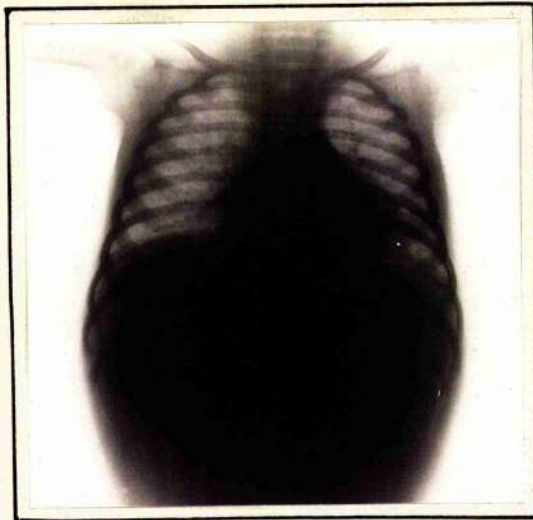


Plate 41. At First Examination.

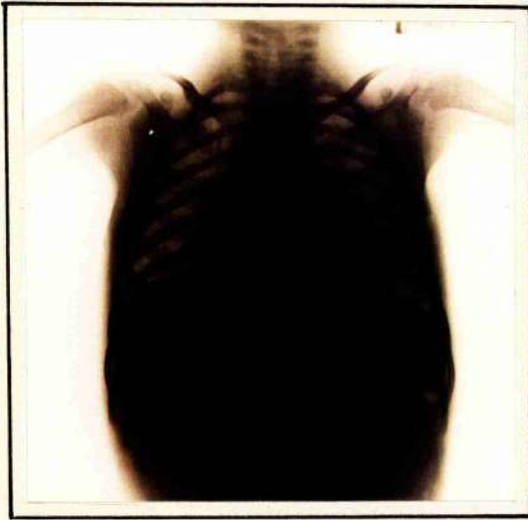


Plate 41 c. At Three Months.

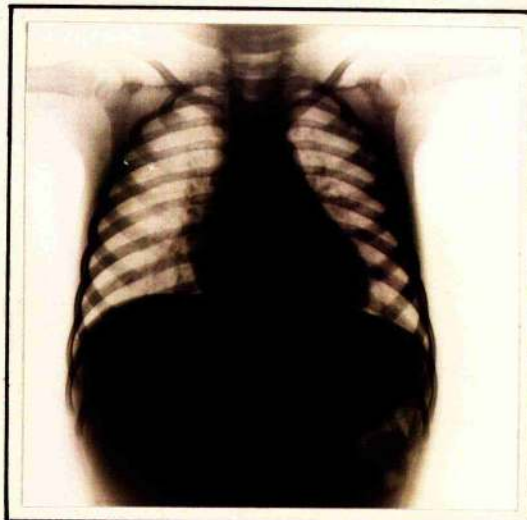


Plate 41 b. At Six Months.

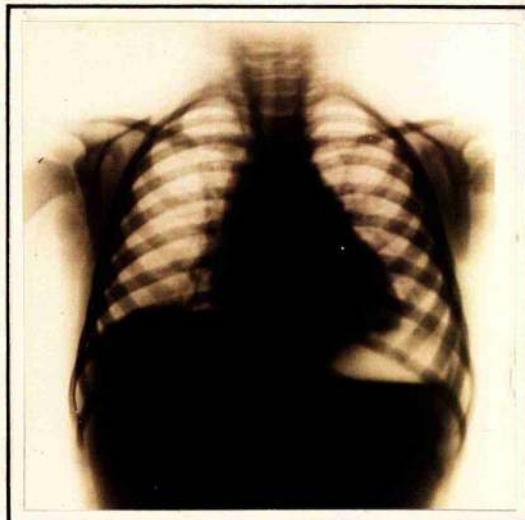


Plate 41 c. At One Year.

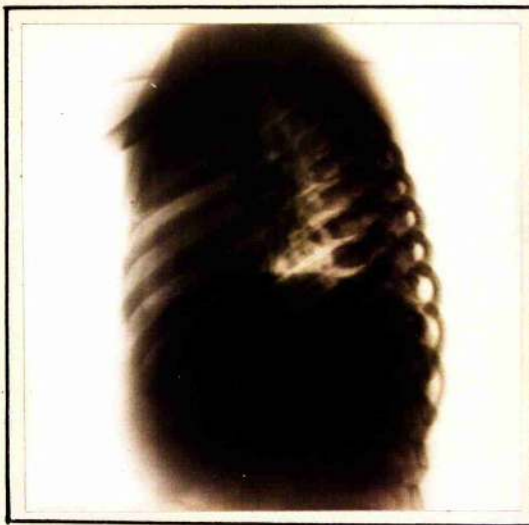
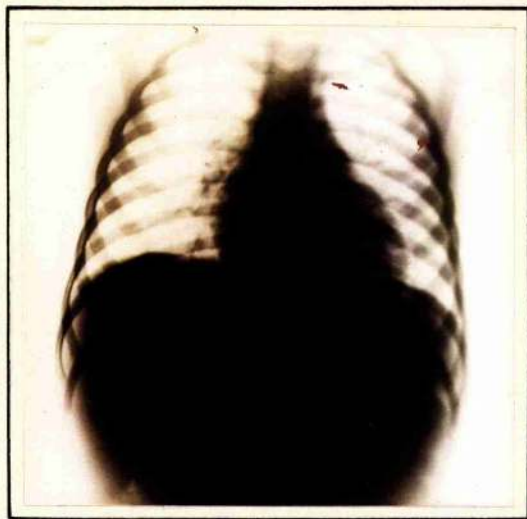


Plate 41 d. At Eighteen Months.

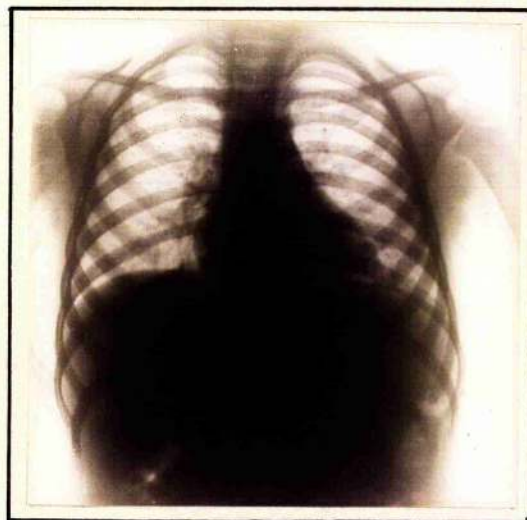


Plate 41 e. At Two Years.

Name. M.O. Sex. Female. Age. 3 years 4 months.

Date of Birth. 9/6/41.

Feeding. At breast for two weeks and thereafter fed on Robinson's Patent Barley when lactation stopped.

Family History. Parents are alive and well. Mother suffered from tuberculous hip joint disease in 1920, when she was nineteen years of age. One brother aged five years five months has measles (Case 40).

Previous Illnesses

Bronchitis October, 1942.
Measles October, 1944.

Environment and Parental Care. The family resides in a two apartment tenement house in the centre of a town. The windows are kept closed during the night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

October, 1944.

(3 years 4 months)

Height and Weight. 36.25 inches. 25 pounds.

Mouth and Teeth. Tongue moist and clean. One decayed tooth (4) in upper jaw. Remainder in good condition.

Teeth in upper jaw: 54321 12345
Teeth in lower jaw: 5-3-- --345
Total number of teeth: 15

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci (*aureus*), pneumococci and streptococci.

Haematology.

Erythrocytes 4,610,000 per c.mm.
Leucocytes 10,044 per c.mm.
Haemoglobin 76 per cent. Colour Index 0.82

Differential Leucocyte Count:-

Neutrophils 50.50 per cent. (5,072 per c.mm.)
Eosinophils 4.00 per cent. (401 per c.mm.)
Basophils 0.25 per cent. (25 per c.mm.)
Lymphocytes 40.50 per cent. (4,067 per c.mm.)
Monocytes 4.75 per cent. (477 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	12	38	51	9	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 18.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 6.25 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign was

not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 42. 'Chest inclined to be long and narrow apically, but symmetrical. Heart normal.

Right lung: Soft root shadow with prominence of tracheo-bronchial and bronchial glands. Extension of striation into basal zone.

Left lung: Root indefinite. Increase in striation generally including that into upper lobe.'

SUBSEQUENT EXAMINATIONS

In December the child had broncho-pneumonia.

At Three Months (January, 1945)

(3 years 7 months)

Height and Weight. 37 inches (increase of 0.75 inch).
25 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 42 a. 'Little alteration in root shadows. Striation to right base is less and to left upper lobe rather more.'

In March the child had a cough for ten days, especially after lying down in bed at night.

At Six Months (April, 1945)

(3 years 10 months)

Height and Weight. 37.75 inches (increase of 0.75 inch).
27 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 42 b. 'Present film shows rather more hilar and peribronchial congestion than shown in January, 1945, but is practically the same as that of October, 1944.'

In September the child had tonsillitis.

At One Year (October, 1945)

(4 years 4 months)

Height and Weight. 39 inches (increase of 1.25 inches).
29 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 42 c. 'Improvement marked in right root shadow particularly.'

In December the child had bronchitis and was in bed for ten days.

At Eighteen Months (April, 1946)

(4 years 10 months)

Height and Weight. 39.75 inches (increase of 0.75 inch).
31 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign was not elicited through non-co-operation of patient. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 42 d. 'Slight improvement in extent of root shadows, though peri-hilar congestion remains. The glands along left upper lobe bronchi show hardening.

Lateral view shows hardening of glands along upper and lower lobe bronchi.'

At Two Years (October, 1946)

(5 years 4 months)

Height and Weight. 41.50 inches (increase of 1.75 inches).
33 pounds (gain of 2 pounds).

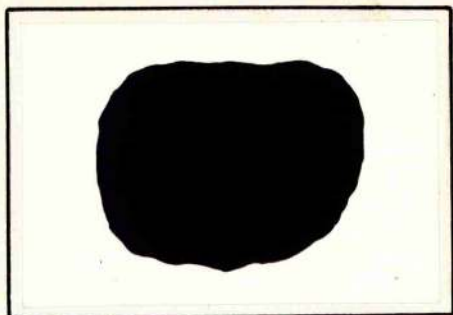
Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

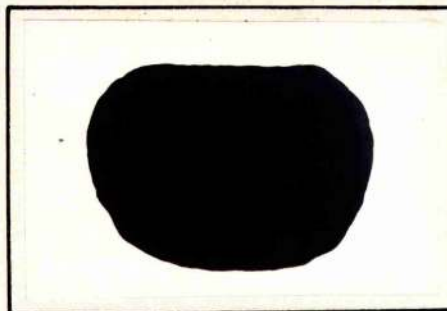
Radiographic Findings

Plate 42 e. 'Root shadows remain diffuse and there is no definite improvement in or reduction of the glandular shadows. Lung striation remains increased as before.'

(one quarter natural size)

Fig. 42.At First Examination

A-P. diameter 5.00 inches.
L. diameter 6.25 inches.

Fig. 42 a.At Two Years

A-P. diameter 5.00 inches.
L. diameter 6.75 inches.

Circumference of Chest During Quiet Respiration

18.50 inches.

20.00 inches.

(Female. 3 years 4 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Bodice	Wool	Knickers	Cotton
Knickers	Wool	Petticoat	Cotton
Petticoat	Cotton		

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Cardigan	Wool	Frock	Cotton
Jumper	Wool		
Skirt	Tweed		
Coat	Tweed		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

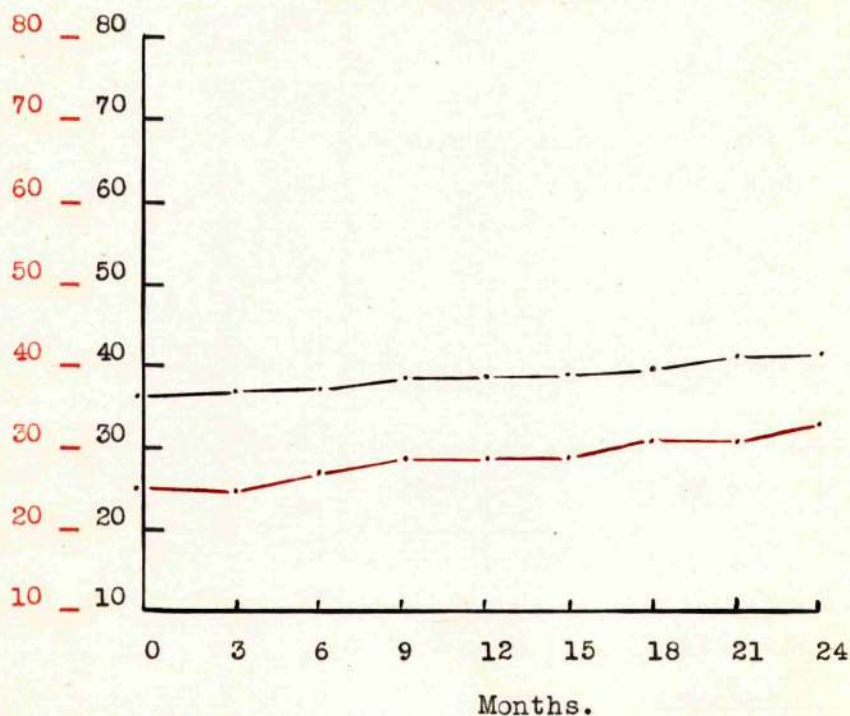
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



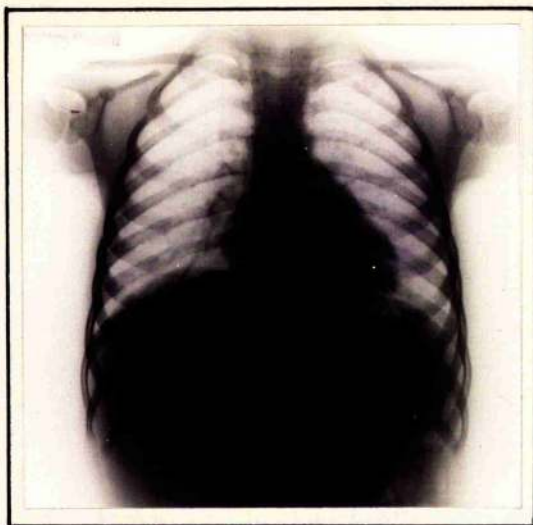


Plate 42. At First Examination.

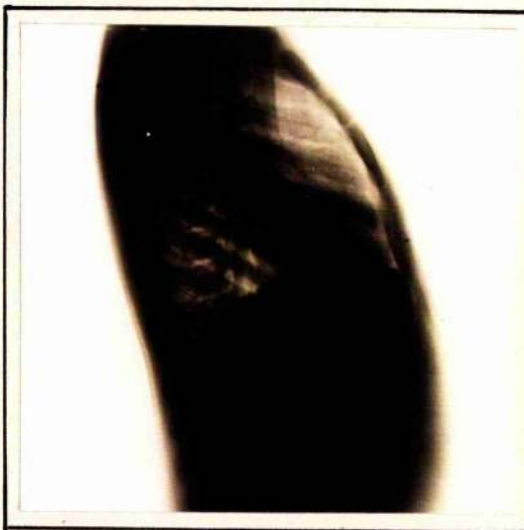


Plate 42 a. At Three Months.

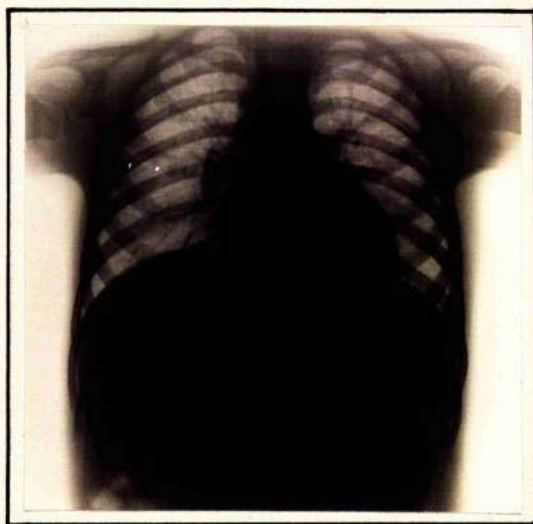


Plate 42 b. At Six Months.

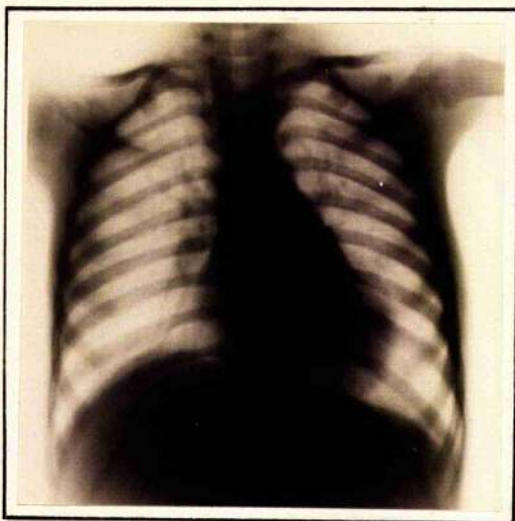


Plate 42 c. At One Year.

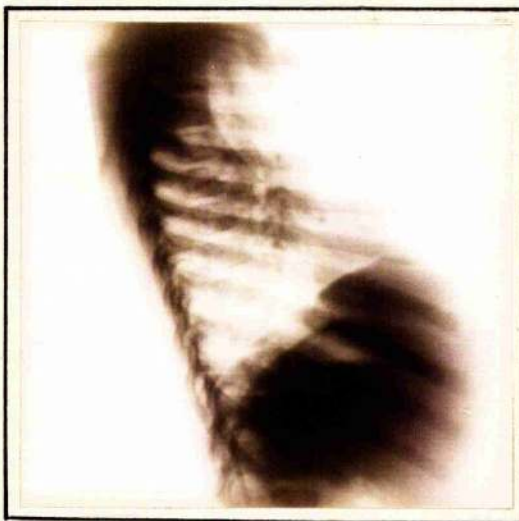
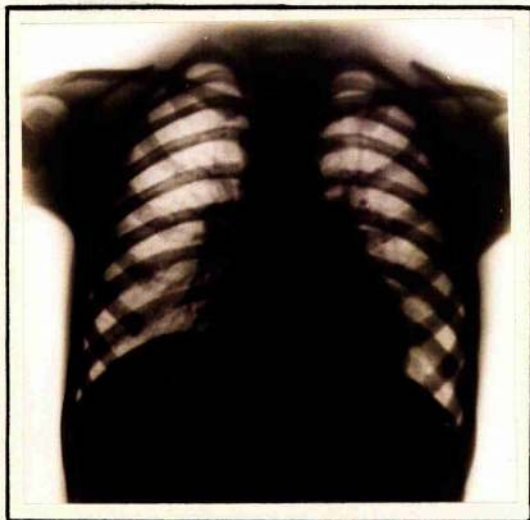


Plate 42 d. At Eighteen Months.

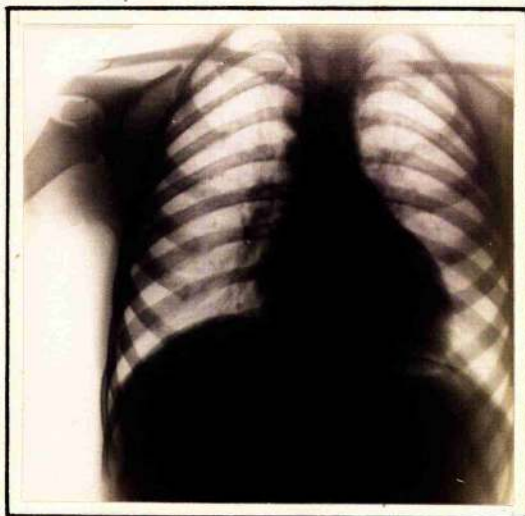


Plate 42 e. At Two Years.

GROUP III
WINTER COUGH CASES
8 CASES

Name. P.I. Sex. Female. Age. 8 years 10 months.

Date of Birth. 31/3/35.

Feeding. At breast for fifteen months.

Family History. Parents are alive and well. One sister aged three years five months is healthy. No family history of tuberculosis.

Previous Illnesses

Measles	February, 1936.
German measles	August, 1939..
Chickenpox	June, 1942.
Bronchitis	November, 1942.

For the past four years the child has been subject to spasmodic, dry, hard cough, during the autumn and winter. The cough lasts for two to three weeks and is most troublesome at night, especially after she lies down in bed.

Environment and Parental Care. The family resides in a corporation housing scheme on the outskirts of a town. The bedroom window is kept closed during the night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

February, 1944.

(8 years 10 months)

Height and Weight. 50.25 inches. 57 pounds.

Month and Teeth. Tongue moist and clean. All decayed teeth have been removed, remainder sound.

Teeth in upper jaw:	-5-321	123-5-
Teeth in lower jaw:	65-321	123--6
Total number of teeth:	17	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, staphylococci, pneumococci, streptococci and diphtheroid types.

Haematology.

Erythrocytes	5,050,000 per c.mm.
Leucocytes	11,696 per c.mm.
Haemoglobin 90 per cent.	Colour Index 0.90

Differential Leucocyte Count:-

Neutrophils	56.00 per cent.	(6,549 per c.mm.)
Eosinophils	0.25 per cent.	(29 per c.mm.)
Basophils	0.50 per cent.	(58 per c.mm.)
Lymphocytes	40.75 per cent.	(4,766 per c.mm.)
Monocytes	2.50 per cent.	(292 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	21	49	27	3	0

Physical Examination of Chest. Muscular development fair. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 22 inches. Antero-posterior diameter 5 inches. Lateral diameter 7.5 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. The child has had a cough for the past two weeks.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 43. 'Chest regular and symmetrical in outline, but increased in transverse diameter with ribs tending to become horizontal. Heart shadow within normal limits.

Right lung: Nodular enlargement of root shadow with definite enlargement of hilar glands. Two small calcified points at level of second intercostal space anteriorly, Ghon's foci. Remainder of lung field shows slight increase of normal lung striation.

Left lung: Similar hilar enlargement with well defined but smaller glandular masses. Slight increase of normal lung striation.'

SUBSEQUENT EXAMINATIONS

At Three Months (May, 1944)

(9 years 1 month)

Height and Weight. 50.5 inches (increase of 0.25 inch). 59 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 43 a. 'As compared with February, 1944, the increase in lung striation has decreased and is almost within normal limits.

The glandular masses in right hilar region have become more defined in outline and have firmed and there is little inflammatory reaction round them,

In the left hilar region the root shadow is less marked and no glands are now seen.

In lateral view glandular masses and right root visible. Thickening of bronchial tree around root, not extending far into lung field.'

At Six Months (August, 1944)

(9 years 4 months)

Height and Weight. 51.25 inches (increase of 0.75 inch). 60 pounds (gain of 1 pound).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no ab-

normality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 43 b. 'Glands are more firm and hard in appearance.'

In November the child had a cough for two weeks, especially after lying down in bed at night.

At One Year (February, 1945)

(9 years 10 months)

Height and Weight. 52.25 inches (increase of 1 inch).
64 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. A very occasional cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 43 c. 'Marked improvement in the root shadows, right and left, both as regards amount and appearance. The root shadow is much less diffuse and is, on right side, small with a central mass of firm bronchial glands, and smaller firm glands along upper lobe bronchi.'

The left root shadow shows no such well defined glandular groups.

The lung fields as a whole show less peribronchial congestion.

Lateral view shows fairly well defined root shadows with a slight increase in prominence of the upper lobe bronchi.'

At Eighteen Months (August, 1945)

(10 years 4 months)

Height and Weight. 53.5 inches (increase of 1.25 inches).
66 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 43 d. 'Definite improvement as compared with films of six months ago. Both root shadows are less extensive, more defined, and the mid-bronchial glands, right and left, are smaller and harder. In addition both lung fields show a return to a more normal amount of lung striation.'

At Two Years (February, 1946)

(10 years 10 months)

Height and Weight. 54.5 inches (increase of 1 inch).
68 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. For the past two weeks the child has had an occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

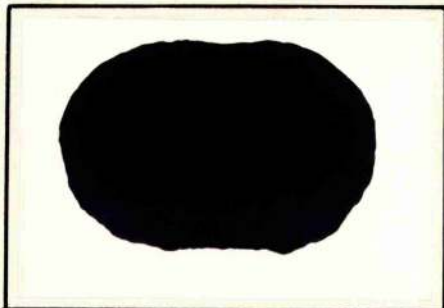
Radiographic Findings

Plate 43 e. 'Compared with six months ago there is no change in the antero-posterior view. Lateral view shows slight reduction in the hilar shadows.'

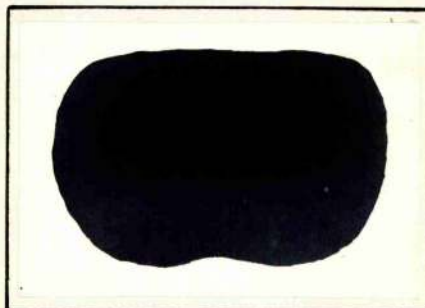
Compared with two years ago the general appearance is relatively unchanged. The root shadows remain as diffuse as before, the glands show only a small diminution in the amount of surrounding inflammatory reaction; the lung fields still show a slight increase in the normal lung striation.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 43.At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.50 inches.

Fig. 43 a.At Two Years

A-P. diameter 5.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

22 inches.

24 inches.

(Female. 8 years 10 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Bodice	Cotton	Knickers	Cotton
Knickers	Cotton		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Blouse	Cotton	Frock	Cotton
Cardigan	Wool		
Kilt	Wool		
Coat	Nap		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.

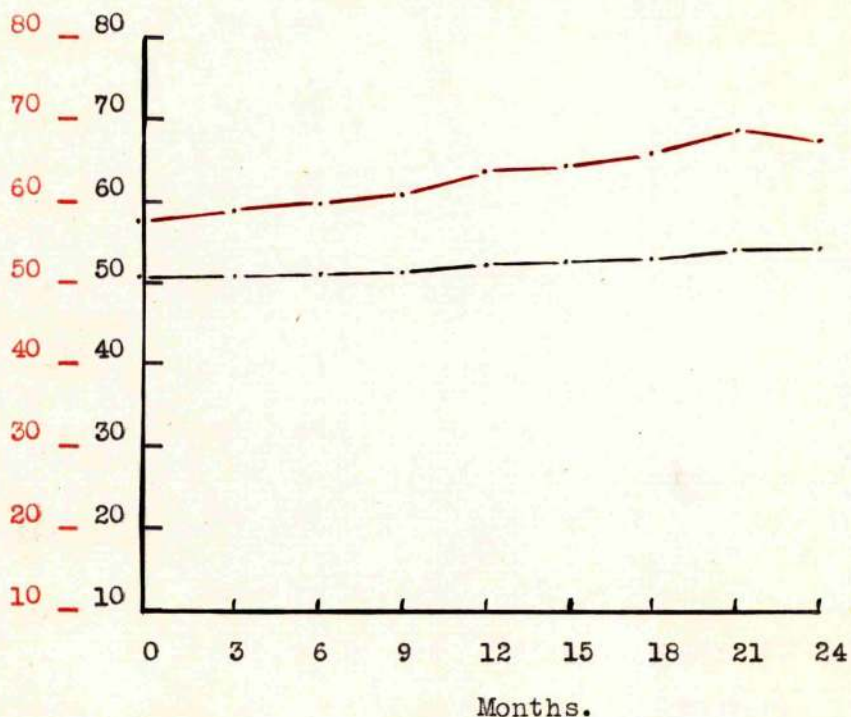




Plate 43. At First Examination.

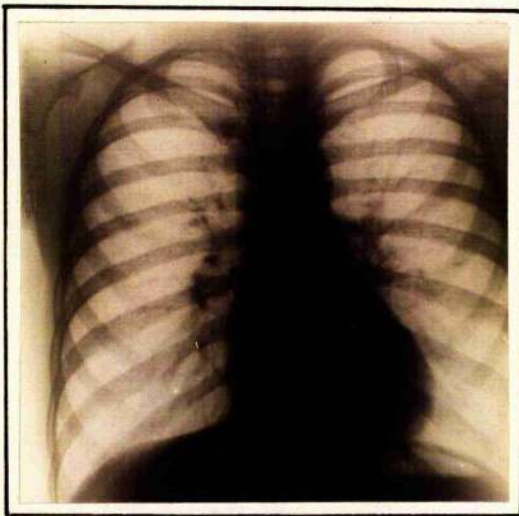


Plate 43 a. At Three Months.

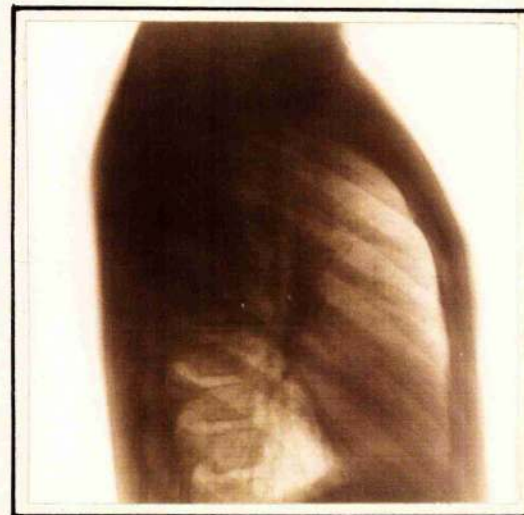
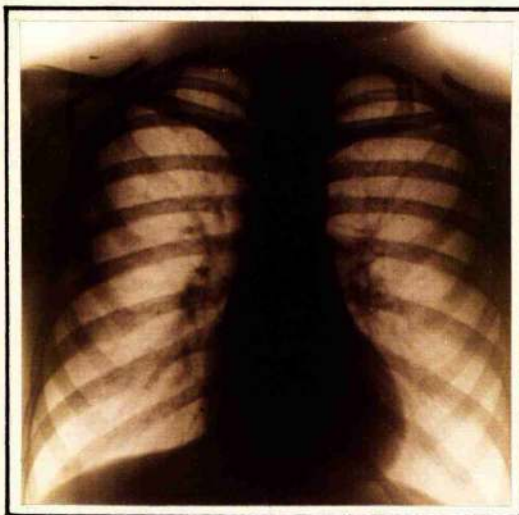


Plate 43 b. At Six Months.

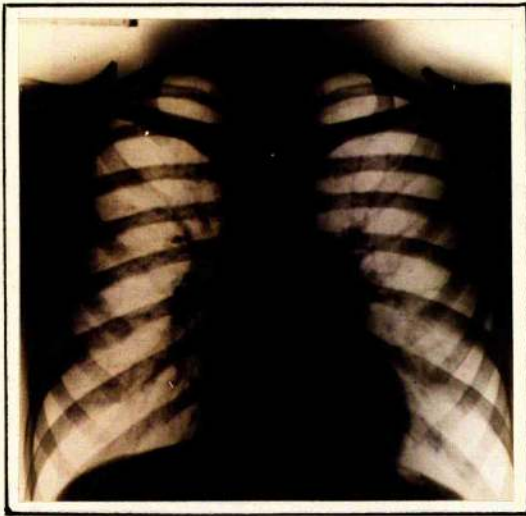


Plate 43 c. At One Year.

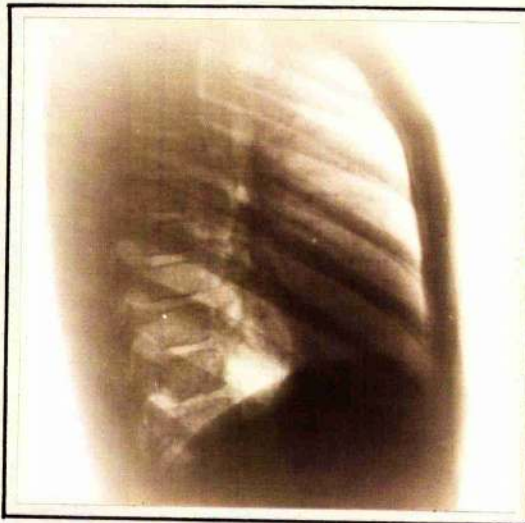
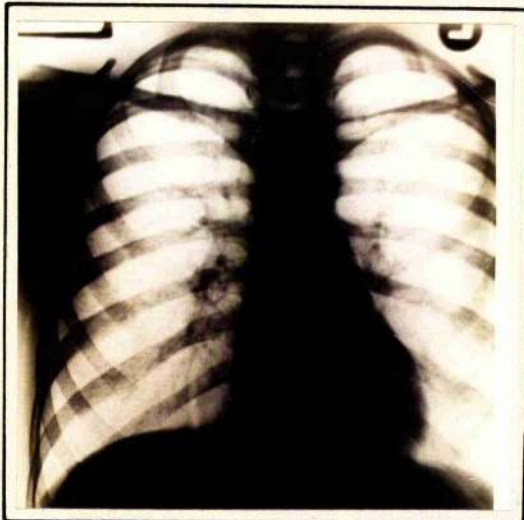


Plate 43 d. At Eighteen Months.

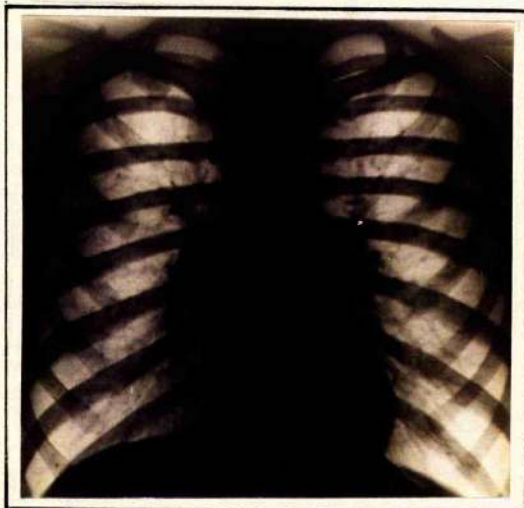


Plate 43 e. At Two Years.

Name. I.H. Sex. Male. Age. 7 years 8 months.

Date of Birth. 14/6/36.

Feeding. At breast for six months and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. One brother aged three years six months is healthy. No family history of tuberculosis.

Previous Illnesses

Measles	October, 1942.
Chickenpox	May, 1943.
German measles	October, 1943.

In March, 1941, the child had a dry, spasmodic cough for two weeks, especially after lying down in bed at night. Since then he has had several attacks, chiefly during the cold season. The cough is always worse when he lies down in bed at night. As a rule the cough lasts for about a week. He had a cough for a week in October, 1943, and again in January and February, 1944. At time of examination he had a cough.

Environment and Parental Care. The family resides in a flat in the centre of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

February, 1944.

(7 years 8 months)

Height and Weight. 49.5 inches. 51 pounds.

Mouth and Teeth. Tongue moist and clean. One decayed tooth (5) in lower jaw, remainder in good condition.

Teeth in upper jaw:	654321	123456
Teeth in lower jaw:	654321	123456
Total number of teeth:	24	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly *M. catarrhalis*, pneumococci and diphtheroid types.

Haematology.

Erythrocytes	5,090,000 per c.mm.
Leucocytes	10,155 per c.mm.
Haemoglobin	90 per cent. Colour Index 0.90

Differential Leucocyte Count:-

Neutrophils	58.25 per cent.	(5,915 per c.mm.)
Eosinophils	1.75 per cent.	(177 per c.mm.)
Basophils	0.00 per cent.	(0 per c.mm.)
Lymphocytes	36.25 per cent.	(3,681 per c.mm.)
Monocytes	3.75 per cent.	(380 per c.mm.)

Arneth Count (Cooke):-

Glass	1	2	3	4	5
Per cent.	23	56	19	2	0

Physical Examination of Chest. Muscular development poor. Scapulae winged. No spinal deformity. Circumference of chest during quiet respiration 23.25 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 8 inches. Skin texture fine. The anterior superficial veins over upper part of chest and shoulders are prominent. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. Cough, especially after lying down in bed at night.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 44. 'Well formed chest, regular and symmetrical in outline. Heart shadow within normal limits.

Right lung: Diffuse hilar gland enlargement. One large central hilar gland. Slight increase of striation, not extending to periphery, except in basal third, where it is more marked.

Left lung: Diffuse enlargement of hilar shadow with upward extension to left upper bronchial gland. Lung field normal except for slight basal striation.

Lateral view: Left lung shows exaggeration of bronchial tree, especially into left upper lobe. No definite glandular enlargement seen.'

SUBSEQUENT EXAMINATIONS

At Three Months (May, 1944)

(7 years 11 months)

Height and Weight. 50.25 inches (increase of 0.75 inch). 56 pounds (gain of 5 pounds).

Physical Examination of Chest. The anterior superficial veins are still prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 44 a. 'As compared with the plate taken three months ago, the root enlargement is slightly less diffuse and there is an improvement in the quality of the shadow. On the left side there is less congestive inflammatory reaction around the upper bronchial gland which is still enlarged.

Lateral view shows a slight reduction in striation leading into left upper lobe.'

At Six Months (August, 1944)

(8 years 2 months)

Height and Weight. 50.5 inches (increase of 0.25 inch). 57 pounds (gain of 1 pound).

Physical Examination of Chest. The anterior superficial veins are less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of

the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 44 b. 'Improvement continues. Upper bronchial gland no longer enlarged, though thickening of bronchial tree in this area persists.'

At One Year (February, 1945)

(8 years 8 months)

Height and Weight. 51.5 inches (increase of 1 inch). Weight not taken as child had leg in plaster due to a fractured tibia.

Physical Examination of Chest. The anterior superficial veins are still prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) patch test was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 44 c. 'Slight improvement in general appearance. Right root shadow is now less diffuse, though there remains an increase in bronchial tree into basal zone.'

The left root shadow is similarly more defined, especially in its upper pole. The striation into upper lobe remains, but with none of the masses hitherto noted. Some basal striation also persists.

Lateral view confirms improvement in root shadows generally.'

At Eighteen Months (August, 1945)

(9 years 2 months)

Height and Weight. 52.75 inches (increase of 1.25 inches). 62 pounds (weight not recorded at one year as leg was in plaster).

Physical Examination of Chest. The anterior superficial veins are prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer patch test (human) was negative. Vollmer (bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 44 d. 'Little change when compared with plate of February, 1945.'

In December the child had a cough for a week, especially after lying down in bed at night.

At Two Years (February, 1946)

(9 years 8 months)

Height and Weight. 53 inches (increase of 0.25 inch).
65 pounds (gain of 3 pounds).

Physical Examination of Chest. Anterior superficial veins over upper part of both sides of chest are prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

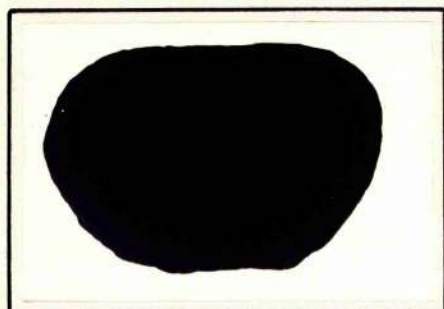
Radiographic Findings

Plate 44 e. 'Compared with six months ago the root shadows remain much the same, but the lung fields are clearer, and lung striation though still present is returning to normal limits. Lateral view confirms this.'

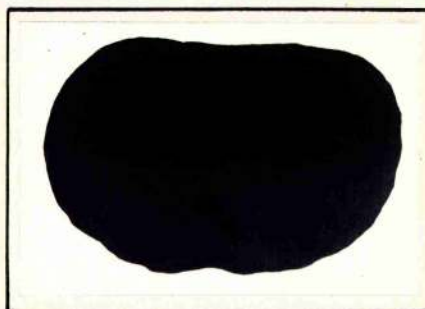
Compared with two years ago there is some reduction in the amount of root shadow and some firming of the remainder; in particular the extension along left upper lobe bronchus is much less marked and the glands there show definite hardening. Lateral view confirms the reduction in peribronchial inflammation.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 44.At First Examination

A-P. diameter 5.50 inches.
L. diameter 8.00 inches.

Fig. 44 a.At Two Years

A-P. diameter 5.50 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

23.25 inches.

25.50 inches.

(Male. 7 years 8 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Pants	Wool	Pants	Cotton

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Pullover	Wool	Trousers	Flannel
Kilt	Wool		
Coat	Tweed		
Scarf	Wool		

No cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

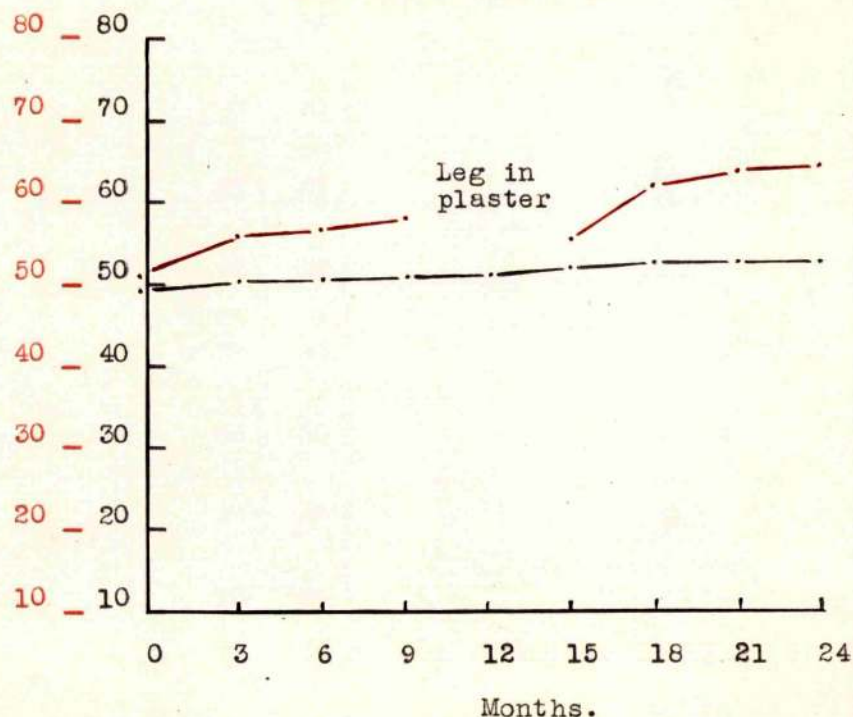
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



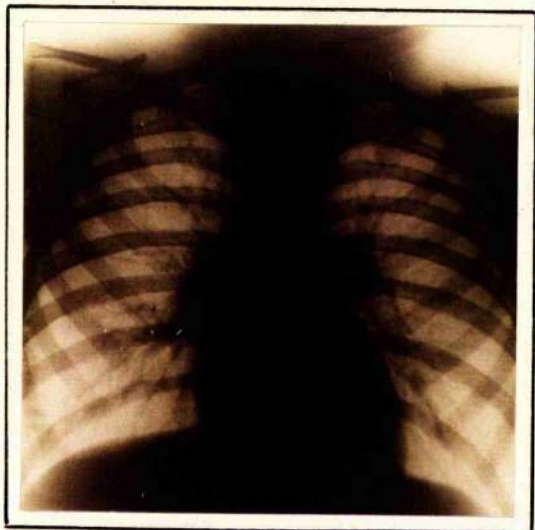


Plate 44. At First Examination.

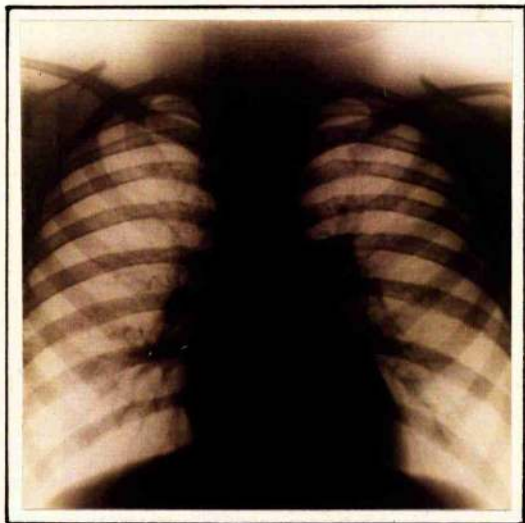


Plate 44 a. At Three Months.

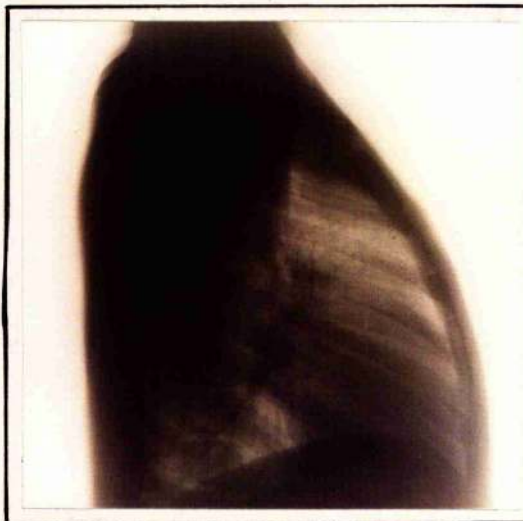
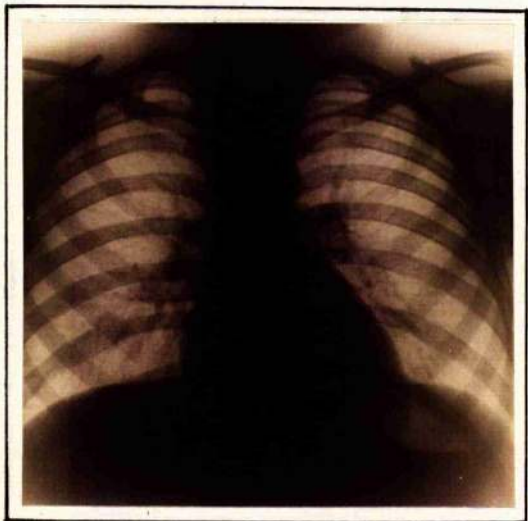


Plate 44 b. At Six Months.

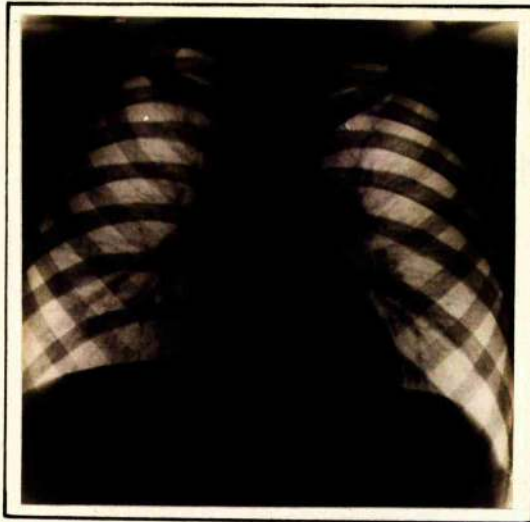


Plate 44 c. At One Year.

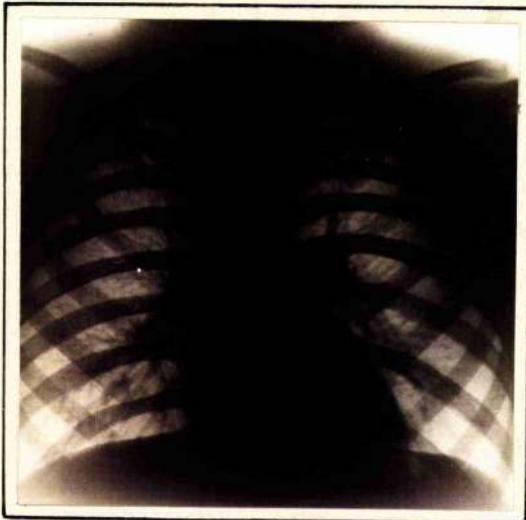


Plate 44 d. At Eighteen Months.

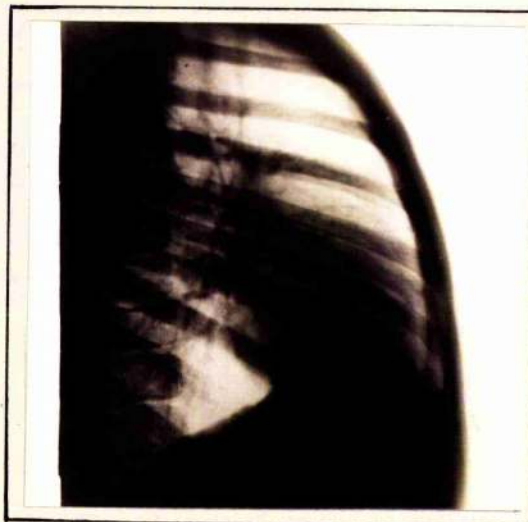
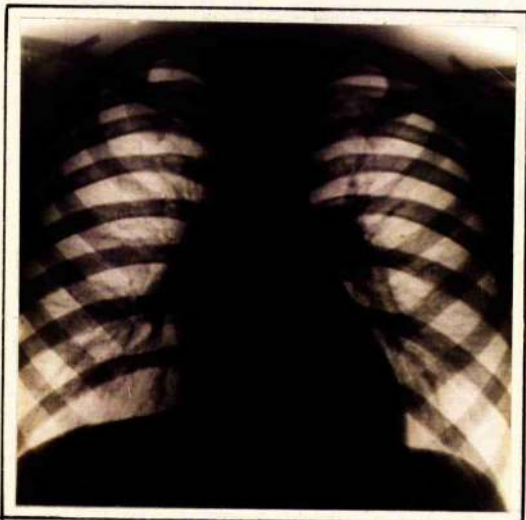


Plate 44 e. At Two Years.

Name. H.A. Sex. Male. Age. 6 years 10 months.

Date of Birth. 12/4/37.

Feeding. At breast for six months and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. Only child.
No family history of tuberculosis.

Previous Illnesses

Measles	March,	1941.
Enteritis	August,	1943.
Influenza	November,	1943.

Since March, 1940, when the child was taken to the shelter during the air raids, he has been subject to attacks of dry, hard cough. The cough is more marked in winter, is spasmodic in character and more frequent after he lies down in bed at night. As a rule it continues from a week to ten days.

His present attack is the most severe he has had and it has lasted since the beginning of January, 1944. For the past two weeks he has been in bed, as he has been listless and not inclined to take his food, which normally he takes well. There has been no pyrexia.

Environment and Parental Care. The child resides with his parents, grandmother and an aunt in a corporation housing scheme on the outskirts of a town. The bedroom windows are kept closed at night. During the day his mother goes out to work and he is left in the care of his grandmother. The child is, however, well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

February, 1944.

(6 years 10 months)

Height and Weight. 45.5 inches. 42 pounds.

Mouth and Teeth. Tongue moist and clean. Two decayed teeth (4 and 5) in upper jaw, remainder in good condition.

Teeth in upper jaw:	-54321	12345-
Teeth in lower jaw:	6--321	123-16
Total number of teeth:	18	

Ear, Nose and Throat. Ears healthy. No nasal discharge.
Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly pneumococci and diphtheroid types.

Haematology.

Erythrocytes	5,830,000 per c.mm.
Leucocytes	13,666 per c.mm.
Haemoglobin 80 per cent.	Colour Index 0.60

Differential Leucocyte Count:-

Neutrophils	61.75 per cent.	(8,438 per c.mm.)
Eosinophils	5.00 per cent.	(683 per c.mm.)
Basophils	1.50 per cent.	(204 per c.mm.)
Lymphocytes	26.50 per cent.	(3,621 per c.mm.)
Monocytes	5.25 per cent.	(717 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	17	48	32	3	0

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Angle between neck and shoulder on right side is flatter than on left. Circumference of chest during quiet respiration 23 inches. Antero-posterior diameter 5.5 inches. Lateral diameter 7.75 inches. Skin texture fine. Enlargement of anterior superficial veins not noted. No enlarged glands. Slight dullness over upper part of sternum. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was positive.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 45. 'Chest of good, regular and symmetrical appearance. Heart shows possible deviation towards the right.

Right lung: Glandular masses in right hilar region. Lung apex clear. Some loss of translucency basally.

Left lung: Diffuse glandular enlargement on left side. Extension of striation basally.

Lateral view: Enlargement of lower bronchial glands. Exaggeration of bronchial tree into lower lobe.'

SUBSEQUENT EXAMINATIONS

In April the child had german measles.

At Three Months (May, 1944)

(7 years 1 month)

Height and Weight. 46 inches (increase of 0.5 inch). 48 pounds (gain of 6 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. Slight dullness over upper part of sternum. On auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 45 a. 'Root enlargement subsiding slowly with less evidence of peribronchial reaction. Not much difference in lateral view.'

In June the child had chickenpox.

At Six Months (August, 1944)

(7 years 4 months)

Height and Weight. 46.25 inches (increase of 0.25 inch). 48 pounds (no gain).

Physical Examination of Chest. Slight enlargement of the anterior superficial veins over upper part of chest and extending

towards both shoulders. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 45 b. 'Right root shadow shows little change. Left root shadow less in extent and density.'

Since the beginning of January the child has had a cough, especially at night and in the early morning.

At One Year (February, 1945)

(7 years 10 months)

Height and Weight. 48 inches (increase of 1.75 inches). 51.5 pounds (gain of 3.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 45 c. 'The right root shadow is still rather diffuse, but some of the gland shadows are much reduced in size. There is still some increased striation throughout the lung fields.

The left root shadow shows marked improvement. A definite reduction in size and a much firmer outline are noted. Some striation remains, especially in mid-lung zone.

Lateral view shows that the root shadow is more defined, but just as extensive as before.'

In April the child had a cough for two weeks, especially after lying down in bed at night.

At Eighteen Months (August, 1945)

(8 years 4 months)

Height and Weight. 49 inches (increase of 1 inch). 54 pounds (gain of 2.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 45 d. 'No apparent change is noted when compared with films of February, 1945.'

During the past three months the child has had a whooping cough-like type of cough, especially after lying down in bed at

night.

At Two Years (February, 1946)

(8 years 10 months)

Height and Weight. 50 inches (increase of 1 inch).
57 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 45 e. 'Compared with six months ago the antero-posterior film is unchanged.

Lateral view does show less congestion around roots.

Compared with two years ago root shadow remains almost equally diffuse, although the individual gland shadows are smaller and firmer. The lung fields have cleared slightly of the increased striation showing previously.

Lateral view shows slight improvement in amount of root congestion and hardening of the individual glands.'

CYRTOMETER TRACINGS

(one quarter natural size)

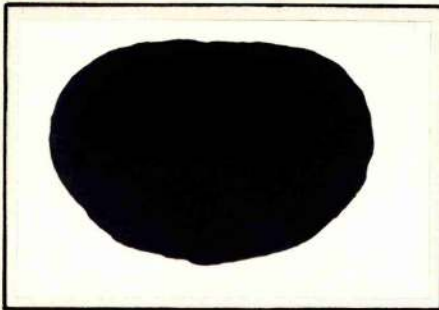


Fig. 45.

At First Examination

A-P. diameter 5.50 inches.
L. diameter 7.75 inches.

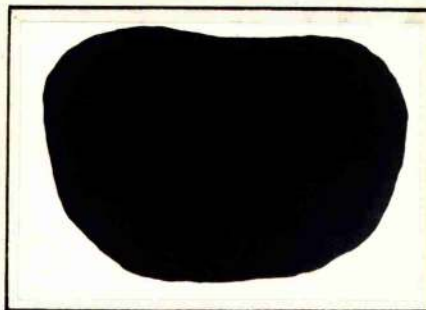


Fig. 45 a.

At Two Years

A-P. diameter 6.00 inches.
L. diameter 8.50 inches.

Circumference of Chest During Quiet Respiration

23 inches.

25 inches.

(Male. 6 years 10 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool	Pants	Wool

Boots and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Shirt	Cotton
Trousers	Tweed	Trousers	Flannel
Blazer	Flannel		
Coat	Nap		
Scarf	Wool		

Knitted helmet.

No cap.

Overclothed:

Constriction of chest due to clothing:

No.

Interference with circulation due to clothing:

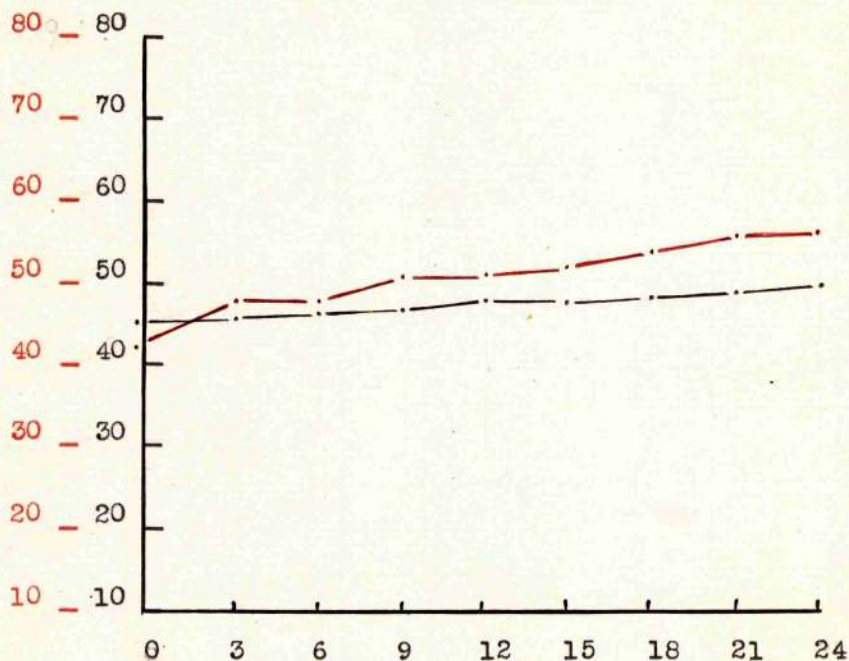
None.

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



Months.

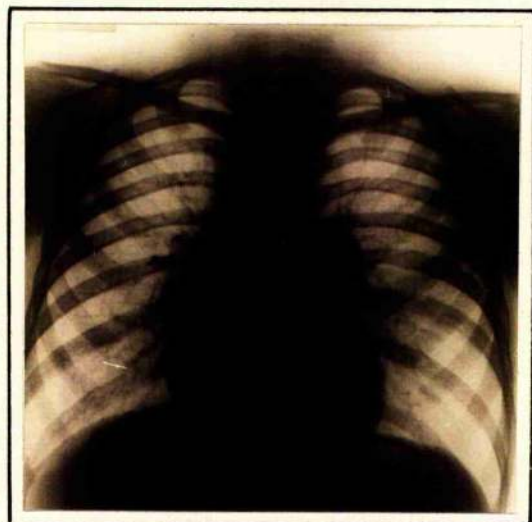


Plate 45. At First Examination.

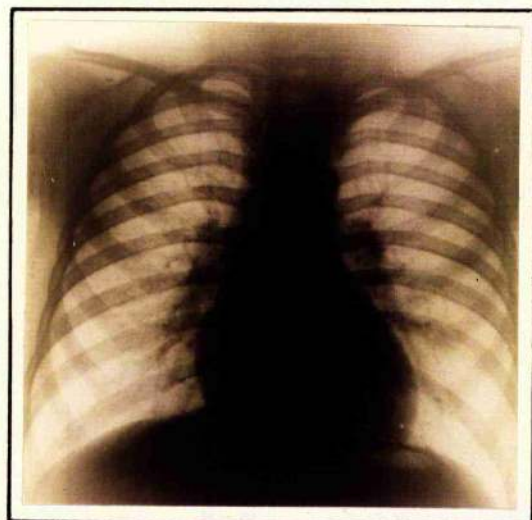


Plate 45 a. At Three Months.

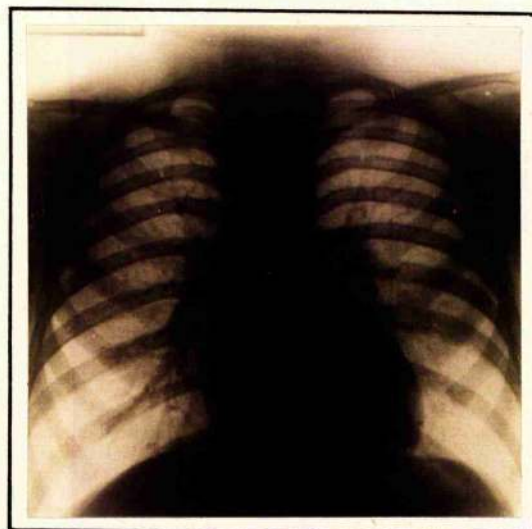


Plate 45 b. At Six Months.

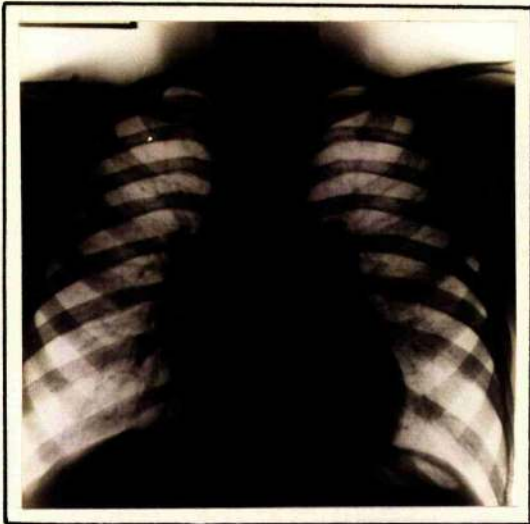


Plate 45 c. At One Year.

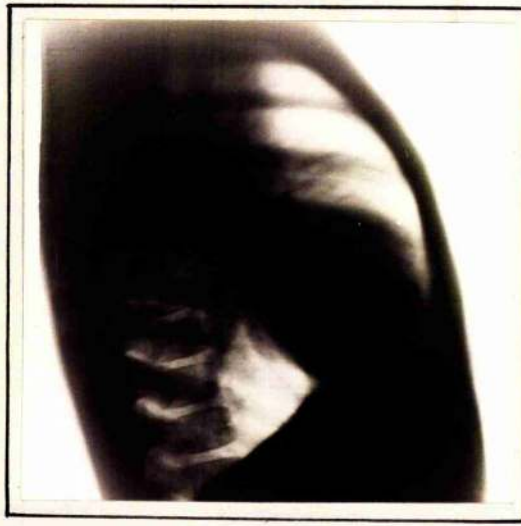
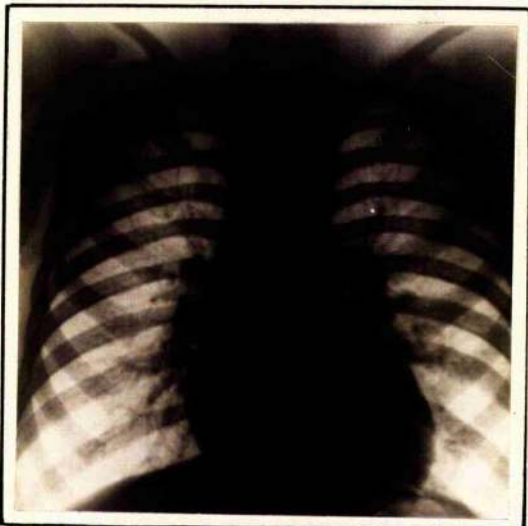


Plate 45 d. At Eighteen Months.

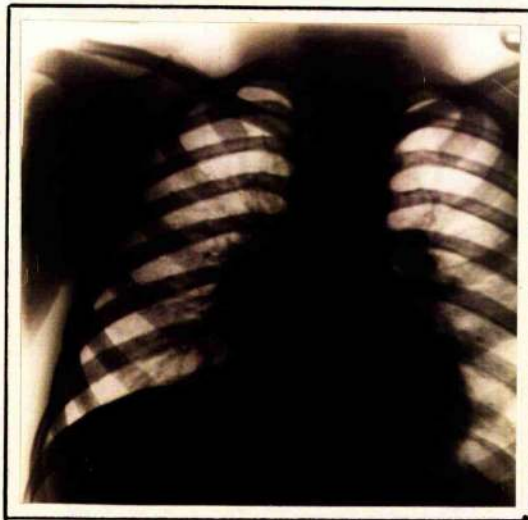


Plate 45 e. At Two Years.

Name. C.Y. Sex. Female. Age. 7 years.

Date of Birth 21/2/37.

Feeding. At breast for two weeks and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. Only child.
No family history of tuberculosis.

Previous Illnesses

Measles	February, 1938.
Chickenpox	January, 1943.
Whooping cough	April, 1943.
German measles	July, 1943.

Since the child had measles in February, 1938, she has been subject to a cough, especially at night when she lies down in bed. As a rule it lasts for ten days. It is more frequent in winter, and more so since she had whooping cough in 1943. For the past six weeks she has had a cough. The cough is hard and spasmodic in character.

Environment and Parental Care. The family resides in a bungalow on the outskirts of a town. The bedroom windows are kept closed at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

February, 1944.

(7 years)

Height and Weight. 47.5 inches. 42 pounds.

Mouth and Teeth. Tongue moist and clean. One decayed tooth (5) in lower jaw. Remainder in good condition.

Teeth in upper jaw:	6543-1	123456
Teeth in lower jaw:	6-4321	123456
Total number of teeth:	22	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly pneumococci, streptococci and diphtheroid types.

Haematology.

Erythrocytes	4,590,000 per c.mm.
Leucocytes	9,600 per c.mm.
Haemoglobin 75 per cent.	Colour Index 0.83

Differential Leucocyte Count:-

Neutrophils	56.75 per cent.	(5,448 per c.mm.)
Eosinophils	1.00 per cent.	(96 per c.mm.)
Basophils	0.50 per cent.	(48 per c.mm.)
Lymphocytes	39.75 per cent.	(3,816 per c.mm.)
Monocytes	2.00 per cent.	(192 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	19	42	33	5	1

Physical Examination of Chest. Muscular development poor. Slight flattening of left side of chest. Scapulae winged. No spinal deformity. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 7.75 inches. Skin texture fine. Enlargement of the anterior superficial veins not noted. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 46. 'Well formed chest, regular and symmetrical in shape. Heart shadow within normal limits.

Right lung: The root shadow is diffuse and extends upwards to a slight degree and more markedly downwards into basal zone. There is a central glandular mass in the hilar region and some enlargement of the right lower bronchial glands. The lung tissue is clear.

Left lung: Some slight increase in hilar markings. Slight increase of lung striation. Lung fields proper show no abnormality.

Lateral view shows the right bronchial tree generally more marked, with central glands and also enlarged glands along bronchi supplying right lower lobe.'

SUBSEQUENT EXAMINATIONS

For the past two months the child has had no cough.

At Three Months (May, 1944)

(7 years 3 months)

Height and Weight. 48.5 inches (increase of 1 inch). 46 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Radiographic Findings

Plate 46 a. 'Definite reduction in inflammatory reaction around hilar region. Glands smaller and firmer. Lung striation not so pronounced in lateral view.'

At Six Months (August, 1944)

(7 years 6 months)

Height and Weight. 49.25 inches (increase of 0.75 inch). 46 pounds (no gain).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 46 b. 'Root shadow unchanged. Rather less lung striation now.'

In November and again in December the child had a hard, dry cough, which lasted, on each occasion, for ten days.

In January she had mumps.

At One Year (February, 1945)

(8 years)

Height and Weight. 50 inches (increase of 0.75 inch).
42.5 pounds (loss of 3.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer patch test (human and bovine) was negative. Tuberculin jelly patch test was positive.

Radiographic Findings

Plate 46 c. 'There is an improvement in the right root shadow, less diffuse, and glands are smaller and more defined in outline. Some lung striation remains, but it is not so soft as in February, 1944. The glands along lower lobe bronchi are hard and well defined. Glands at upper pole of root shadow and along upper lobe bronchi are much firmer.

Lateral view shows root congestion less marked.'

At Eighteen Months (August, 1945)

(8 years 6 months)

Height and Weight. 50.5 inches (increase of 0.5 inch).
48 pounds (gain of 5.5 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 46 d. 'Right root and lung show little change as compared with February, 1945. The left root shadow is more diffuse in the upper half, with slightly more congestion around the glands along the upper lobe bronchus. There is much peribronchial congestion in the left upper lobe.

Lateral view confirms increased upper lobe congestion.'

In December and in January the child had a cough which lasted for ten days.

At Two Years (February, 1946)

(9 years)

Height and Weight. 52 inches (increase of 1.5 inches).
52 pounds (gain of 4 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was present. For the past week she has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

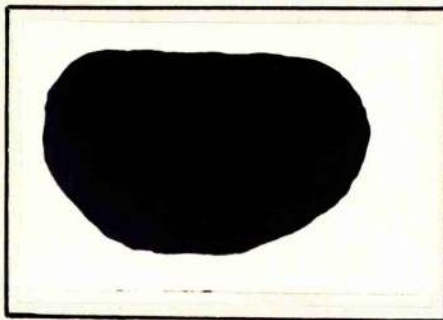
Plate 46 e. 'There is a slight improvement to be noted in the past six months both in the extent of the root shadow and the hardness of the right central and lower bronchial glands.'

Compared with two years ago there is a definite improvement in the appearance of the lung fields, the lung striation being within normal limits. The root shadow remains diffuse but is less in extent than two years ago. The central bronchial glands on the right side are much smaller, harder, as are also those along the right lower lobe bronchi.

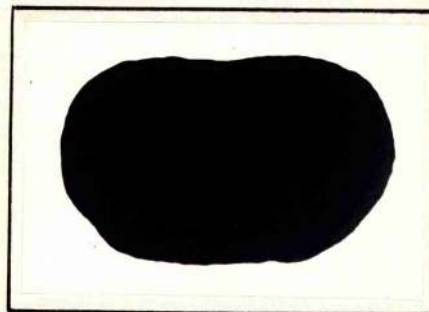
Both lateral views confirm the continued hardening of glands in right root.'

CYRTOMETER TRACINGS

(one quarter natural size)

Fig. 46.At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.75 inches.

Fig 46 a.At Two Years

A-P. diameter 5.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

21.5 inches.

23.0 inches.

(Female. 7 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Vest	Wool	Bodice	Wool
Bodice	Wool	Panties	Cotton
Panties	Wool		
Panties	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Frock	Cotton
Cardigan	Wool		
Kilt	Wool		
Coat	Nap		
Scarf	Wool		

Hat.

No hat.

Overclothed:

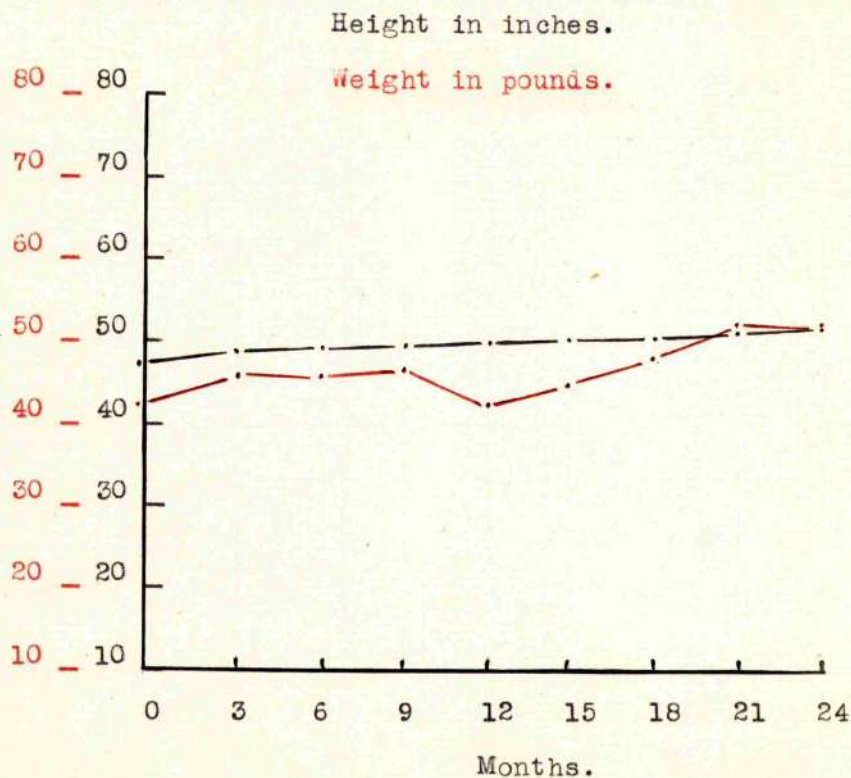
Yes.

Constriction of chest due to clothing:

None.

Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

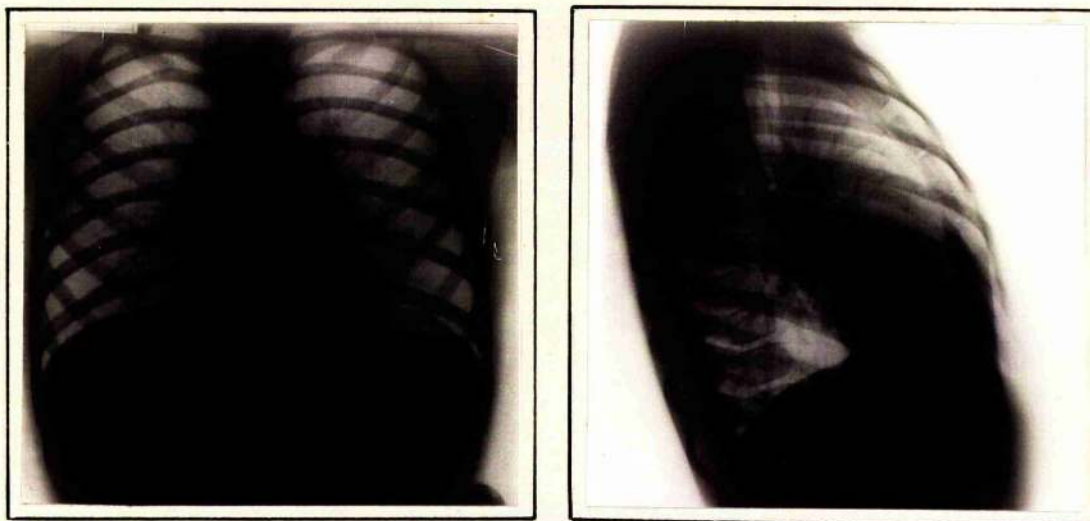


Plate 46. At First Examination.

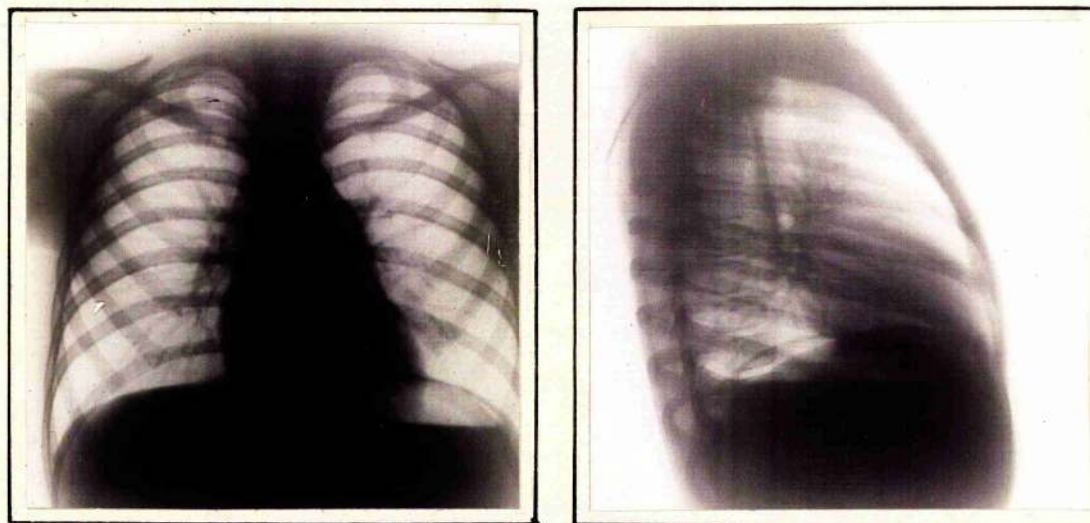


Plate 46 a. At Three Months.

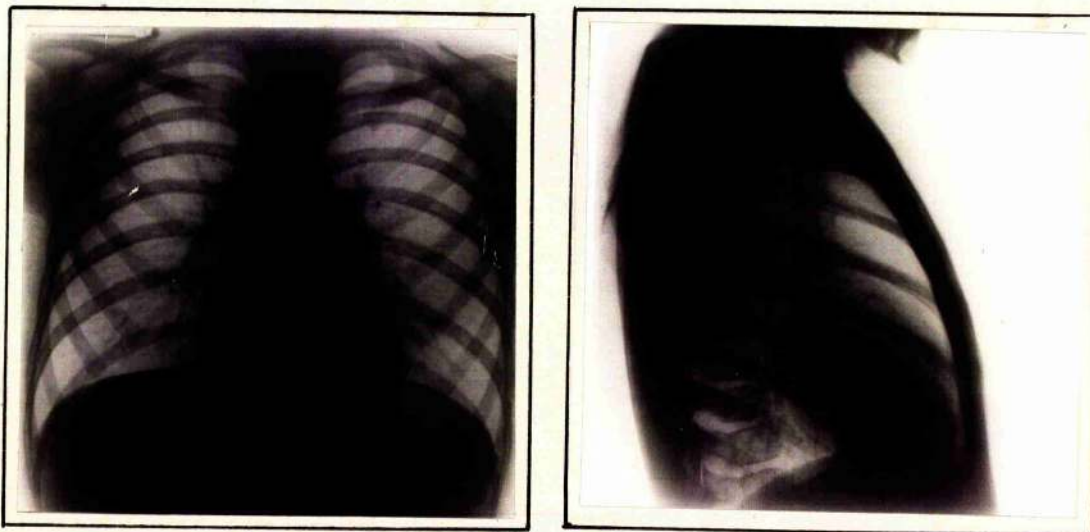


Plate 46 b. At Six Months.

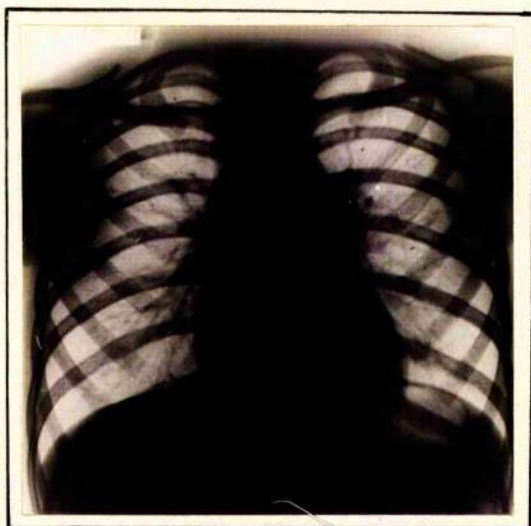


Plate 46 c. At One Year.

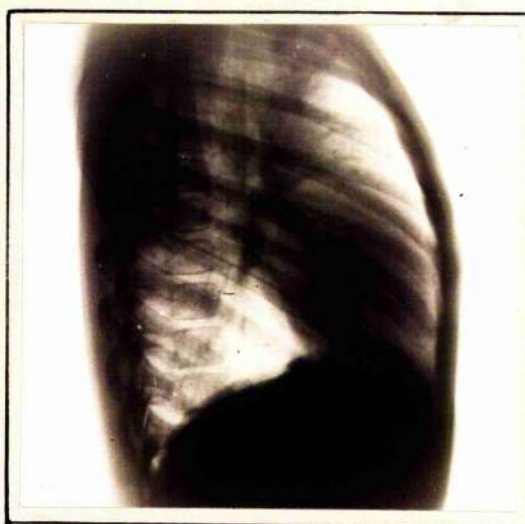
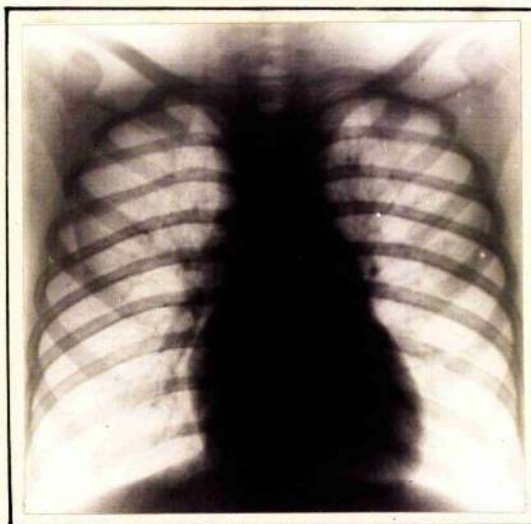


Plate 46 d. At Eighteen Months.

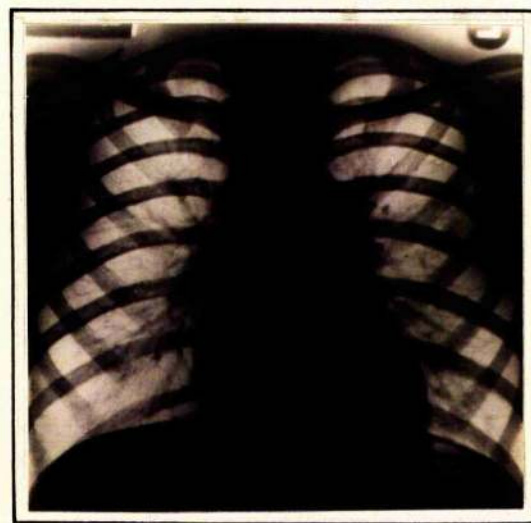


Plate 46 e. At Two Years.

Name. J.D. Sex. Male. Age. 6 years.

Date of Birth. 19/3/38.

Feeding. At breast for six weeks and thereafter fed on Cow and Gate when lactation stopped.

Family History. Parents are alive and well. Only child.
No Family history of tuberculosis.

Previous Illnesses

Small suppurative left sided
cervical adenitis anterior to
the sterno mastoid muscle.
Gland incised February, 1940.

Small suppurative left sided
cervical adenitis posterior to
the sterno mastoid muscle.
Gland incised March, 1940.

Measles December, 1942.
Whooping cough February, 1943.

Since the child had whooping cough in February, 1943, he has been subject to dry, spasmodic cough. It usually lasts for ten days. It is more frequent during cold weather. For the past two weeks he has had a cough.

Environment and Parental Care. The family resides in a bungalow on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

March, 1944.

(6 years)

Height and Weight. 44.75 inches. 43 pounds.

Mouth and Teeth. Tongue moist and clean. Teeth in perfect condition.

Teeth in upper jaw:	54321	12345
Teeth in lower jaw:	54321	12345
Total number of teeth:	20	

Ear, Nose and Throat. Ears healthy. No nasal discharge.
Tonsils and adenoids satisfactorily removed in June, 1940.

Naso-facial Flora. Mainly M.catarrhalis, streptococci, pneumococci and diphtheroid types.

Haematology.

Erythrocytes	5,050,000 per c.mm.
Leucocytes	14,733 per c.mm.
Haemoglobin	90 per cent. Colour Index 0.90

Differential Leucocyte Count:-

Neutrophils	43.25 per cent.	(6,372 per c.mm.)
Eosinophils	3.50 per cent.	(515 per c.mm.)
Basophils	1.25 per cent.	(184 per c.mm.)
Lymphocytes	48.75 per cent.	(7,182 per c.mm.)
Monocytes	3.25 per cent.	(478 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	7	27	54	11	1

Physical Examination of Chest. Muscular development good. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 21 inches. Antero-posterior diameter 5 inches. Lateral diameter 7.5 inches. Skin texture fine. Slight enlargement of anterior superficial veins over upper part of chest. No enlarged glands. Scars over glands in neck which were incised are quite healed. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Test. Vollmer patch test (human) was positive. Vollmer patch test (bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 47. 'Well formed chest. Heart shadow is central and normal.'

Both hilar shadows are enlarged and several small fibrous nodules are noted in these regions. There is a slight increase in moderately fine mottling throughout both lungs, this mottling becoming coarser in the lower halves. No evidence of pleurisy is present at either base. There is a slight suggestion of increased striation in the left upper half.

Lateral view shows some enlargement of the hilar shadow, a few fibrous nodules in these regions and a certain amount of coarse mottling extending into the lower half.'

SUBSEQUENT EXAMINATIONS

Since the date of last examination the child has kept well, except for an occasional cough during cold weather.

At Three Months (June, 1944)

(6 years 3 months)

Height and Weight. 45.75 inches (increase of 1 inch). 44 pounds (gain of 1 pound).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Radiographic Findings

Plate 47 a. 'Comparison of the recent plates of this patient's chest with those taken in March last, shows that the increase in the hilar shadows and in the coarse mottling extending from them into the bases has undergone a certain decrease, this being particularly noted in the left side. The number of fibrous nodules noted previously has also decreased.'

Lateral views show an even more striking decrease in size of the root shadows. In the present plate these appear to be considerably smaller and once again the number of nodules is decreased. The mottling extending from them into the bases also appears to be less marked in the present plate.'

At Six Months (September, 1944)

(6 years 6 months)

Height and Weight. 46.5 inches (increase of 0.75 inch).
47 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight enlargement of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and tuberculin jelly patch tests were positive. Vollmer patch test (bovine) was negative.

Radiographic Findings

Plate 47 b. 'Comparison with the previous plates shows a slight diminution in the size of the hilar shadows. The fibrous nodules noted in the previous plates show a definite decrease in size and the amount of fibrosis and even calcification present in these regions appears to be definitely increased.'

At One Year (March, 1945)

(7 years)

Height and Weight. 47.5 inches (increase of 1 inch).
49 pounds (gain of 2 pounds).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are less prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

For the past week the child has had a cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 47 c. 'Compared with the plates taken in March, 1944 the findings generally are substantially the same in both sets of plates, though it is possible that in the present plate the apical regions are somewhat clearer than in the former plates.

The findings noted in the lateral plates are practically identical.'

At Eighteen Months (September, 1945)

(7 years 6 months)

Height and Weight. 48.75 inches (increase of 1.25 inches).
52 pounds (gain of 3 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins very much less. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 47 d. 'The findings are very similar to those noted in March, 1945. The hilar shadows are still enlarged and certain fibrous nodules are present in these regions. A certain amount of increased mottling is present throughout the lungs and some peribronchial mottling is present in the lower halves, especially on the right side. Comparison with the previous plates shows that the hilar enlargement on the left side is somewhat less well marked than was noted previously.

Lateral views show findings which are similar.'

At Two Years (March, 1946)

(8 years)

Height and Weight. 49.5 inches (increase of 0.75 inch).
55 pounds (gain of 3 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the first dorsal spine. Rustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 47 e. 'The hilar shadows are somewhat enlarged, especially on the right side and there is some evidence of the development of some fibrous nodules in these regions. There is a certain amount of increased peribronchial mottling in the lower halves, especially on the right side. The findings are similar to those noted in March, 1944 and September, 1945.

Lateral views confirm these findings and show a diminution in the size of the hilar shadows and that the fibrous nodules here are more defined at the present time.'

CYRTOMETER TRACINGS

(one quarter natural size)

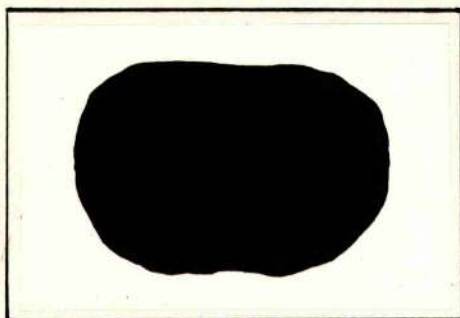


Fig. 47.

At First Examination

A-P. diameter 5.00 inches.
L. diameter 7.50 inches.

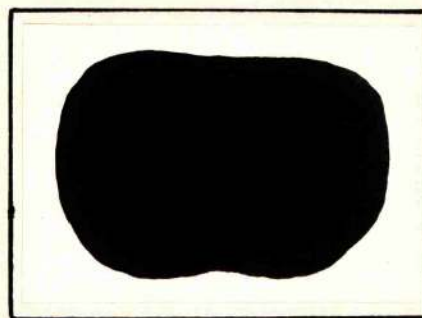


Fig. 47 a.

At Two Years

A-P. diameter 5.25 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

21 inches.

23 inches.

(Male. 6 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Bodice	Wool	Pants	Wool
Pants	Wool		

Shoes and stockings.

Sandals and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Pullover	Wool	Shirt	Cotton
Kilt	Wool	Trousers	Flannel
Coat	Nap		
Scarf	Wool		

Cap.

No cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

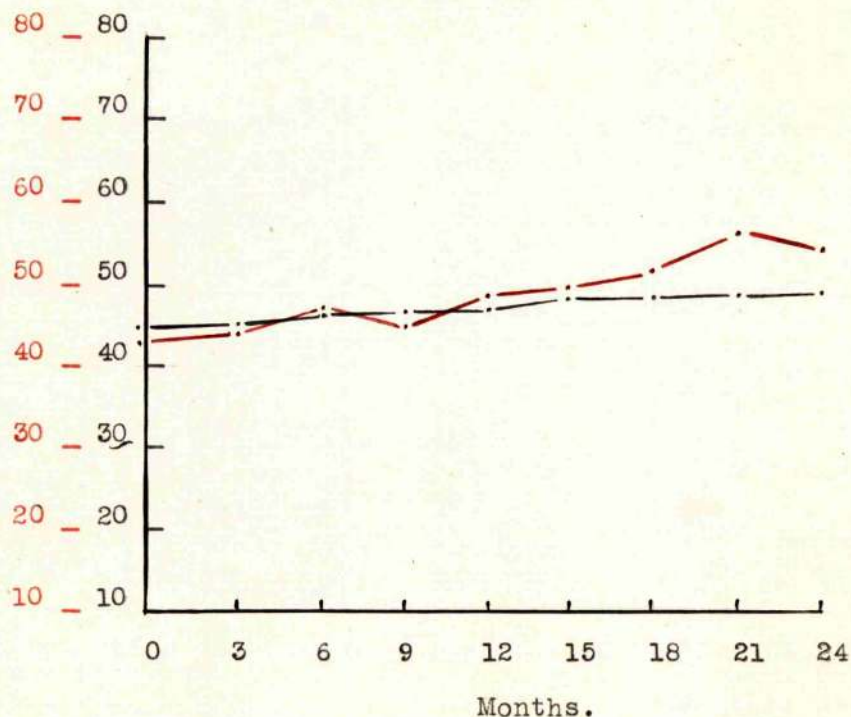
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



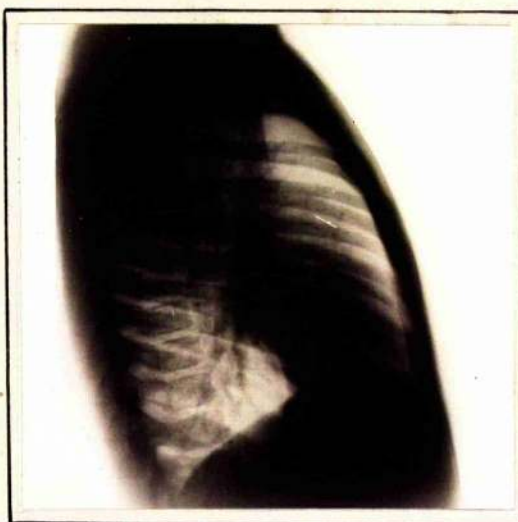
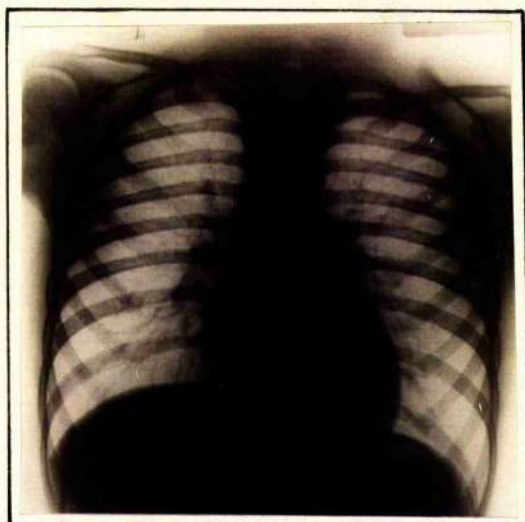


Plate 47. At First Examination.

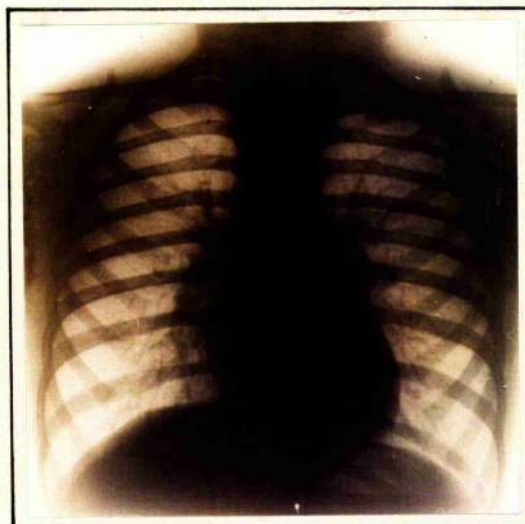


Plate 47 a. At Three Months.

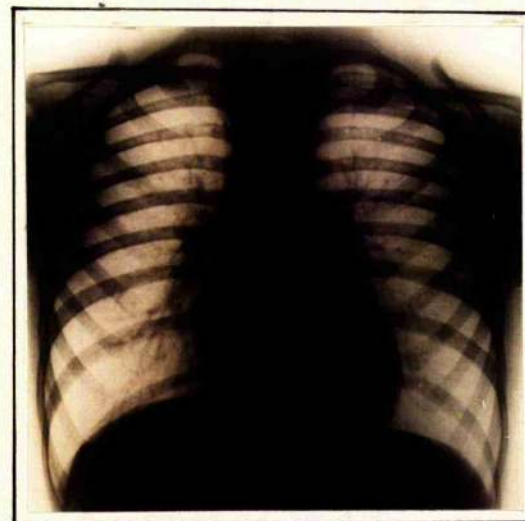


Plate 47 b. At Six Months.

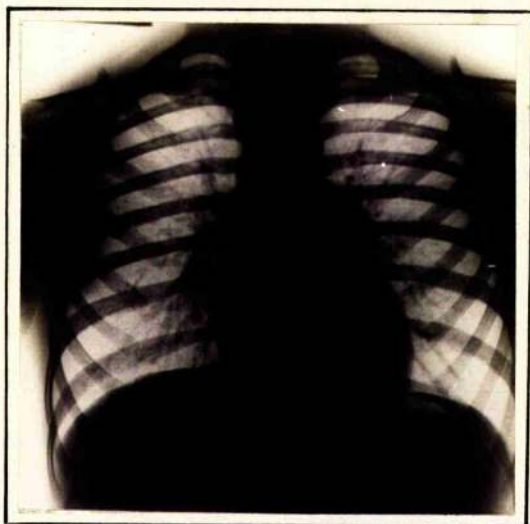


Plate 47 c. At One Year.

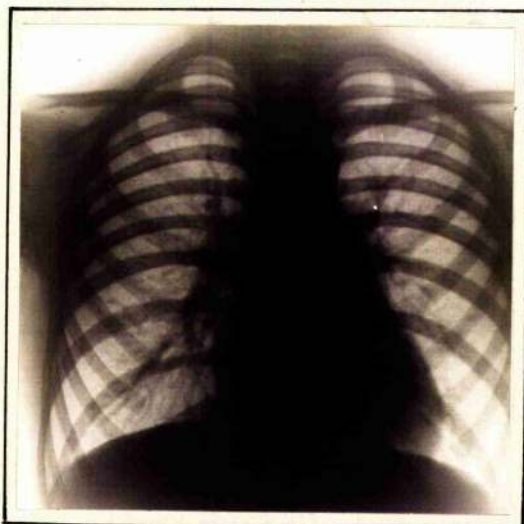


Plate 47' d. At Eighteen Months.

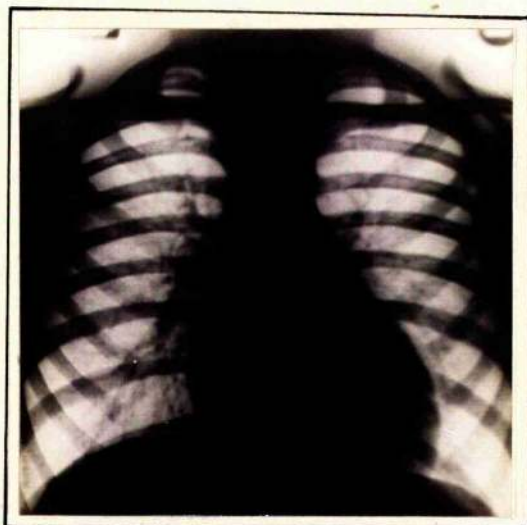


Plate 47 e. At Two Years.

Name. E.S. Sex. Female. Age. 8 years 6 months.

Date of Birth. 9/3/36.

Feeding. At breast for three months and thereafter fed on cow's milk (boiled) when lactation stopped.

Family History. Parents are alive and well. One brother aged six years eight months is healthy. One sister aged four years eight months is healthy. No family history of tuberculosis.

Previous Illnesses

Chickenpox	August,	1936.
Measles	May,	1939.
Whooping cough	June,	1939.
Mumps	October,	1941.
Bronchitis	November,	1943.
Bronchitis	June,	1944.

Since the child had whooping cough in June, 1939 she has been subject to dry spasmodic cough which lasts usually from September till June. The cough starts on her return to school in September and continues till her summer holidays in June. It affects her most after she has gone to bed at night and in the early morning. It is worse in damp or misty weather. She had an acute bronchitis in November, 1943 and again in June, 1944. She has remained well since June and has had no cough till ten days ago when she developed bronchitis, which is now clearing.

Environment and Parental Care. The family resides in a three apartment house on the outskirts of a town. The bedroom windows are always kept open. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

September, 1944

(8 years 6 months)

Height and Weight. 49.5 inches. 40 pounds.

Mouth and Teeth. Tongue moist and clean. Five decayed teeth (5 4 3 and 5) in upper jaw and one (4) in lower jaw. Remainder in good condition.

Teeth in upper jaw:	654321	123456
Teeth in lower jaw:	6-4-21	1234-6
Total number of teeth:	21	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids enlarged.

Naso-faucial Flora. Mainly M.catarrhalis, staphylococci, (aureus), diphtheroids and streptococci including haemolytic strains.

Haematology

Erythrocytes	5,500,000 per c.mm.
Leucocytes	10,355 per c.mm.
Haemoglobin 88 per cent.	Colour Index 0.80

Differential Leucocyte Count:-

Neutrophils	52.75 per cent.	(5,462 per c.mm.)
Eosinophils	10.25 per cent.	(1,061 per c.mm.)

Basophils 1.50 per cent. (155 per c.mm.)
 Lymphocytes 32.75 per cent. (3,391 per c.mm.)
 Monocytes 2.75 per cent. (284 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	20	38	36	5	1

Physical Examination of Chest. Muscular development very poor. Scapulae prominent. Slight degree of scoliosis to right. Circumference of chest during quiet respiration 21.5 inches. Antero-posterior diameter 5 inches. Lateral diameter 7.5 inches. Skin texture coarse. The anterior superficial veins, especially on right side of neck are prominent. No enlarged glands. Percussion note clear except between last cervical and upper two dorsal vertebrae, where there is slight dullness. Breath sounds vesicular and harsh with scattered rhonchi and a few moist sounds, especially on right side. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. Occasional cough.

Tuberculin Skin Test. Vollmer patch test (human) was positive. Vollmer patch test (bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 48. 'Fairly well developed chest. Heart shadow central and normal.

Both hilar shadows are enlarged and numerous small fibrous nodules are present in these regions. Moderately coarse mottling extends from the hilar regions downwards into the bases on both sides and if anything these changes are more marked on the left side than on the right. Both upper halves show a slight increase of lung striation. There is no pleurisy at either base and both apices are clear.

Lateral views show definite evidence of hilar enlargement together with numerous relatively small fibrous nodules in these regions. Catarrhal changes are noted extending upwards and downwards from the hilar regions into the adjacent lung substance.

SUBSEQUENT EXAMINATIONS

In October the child had a corneal ulcer of the right eye.

At Three Months (December, 1944)

(8 years 9 months)

Height and Weight. 50 inches (increase of 0.5 inch).
 41 pounds (gain of 1 pound).

Physical Examination of Chest. Prominence of anterior superficial veins in neck less. On percussion and auscultation no abnormality was detected except that breath sounds were harsh. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after she has gone to bed and in the early morning.

Radiographic Findings

Plate 48 a. 'Both hilar shadows are enlarged and several small fibrous nodules are present in these regions. A certain amount of moderately coarse mottling extends from the hilar regions

downwards into the bases on both sides and once again these changes are if anything slightly more marked on the left side than on the right. Both upper halves show a slight increase of lung striation.

Lateral views show a definite enlargement of the hilar shadows while a certain amount of catarrhal mottling extends upwards and downwards from the hilar region into the adjacent lung substance.

Comparison between the two plates shows that the number of nodules noted in the hilar regions is lessened and that the size of the nodules here appears to show a decrease.'

In January and in February the child had bronchial catarrh which lasted on each occasion for ten days.

At Six Months (March, 1945)

(9 years)

Height and Weight. 50.25 inches (increase of 0.25 inch).
41 pounds (no gain).

Physical Examination of Chest. No change in the appearance of the anterior superficial veins. On percussion no abnormality was detected. A few scattered rhonchi heard throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. An occasional cough, especially after lying down in bed at night and in the early morning.

Tuberculin Skin Tests. Vollmer patch test (bovine) was negative. Vollmer (human) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 48 b. 'The hilar shadows are both enlarged. Both lungs show an increase in fine lung mottling, this change being most obvious in the left lung and if anything more so in the upper half. The findings are similar to those noted in previous plates. It should be noted, however, that the degree of hilar enlargement, especially in the left side, appears to be somewhat smaller and there is evidence of a definite increase in the amount of fibrosis noted here. This finding is most obvious when the present plate is compared with one taken in September, 1944.'

In April the child had her tonsils and adenoids removed.

In June she had a cough for two weeks and also for the past ten days, especially after lying down in bed at night.

At One Year (September, 1945)

(9 years 6 months)

Height and Weight. 51 inches (increase of 0.75 inch).
45 pounds (gain of 4 pounds).

Physical Examination of Chest. Anterior superficial veins less marked. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer patch test (bovine) was negative. Vollmer (human) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 48 c. 'The findings are similar to those noted in March, 1945 and in September, 1944. The hilar shadows are slightly enlarged, though possibly somewhat smaller than those previously noted. Certain fibrous nodules are noted in these regions. Both lungs show an increase of moderate lung mottling and coarser vascular changes are present in the lower halves.

Lateral view confirms these findings. Here again the root shadows are noted to be enlarged but to be somewhat smaller than noted in previous plates.'

In November the child had bronchitis and in January influenza.

At Eighteen Months (March, 1946)

(10 years)

Height and Weight. 51.75 inches (increase of 0.75 inch).
48 pounds (gain of 3 pounds).

Physical Examination of Chest. Very slight enlargement of anterior superficial veins. On percussion no abnormality was detected. A few scattered rhonchi over left side of chest, towards left apex. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. An occasional cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 48 d. 'The findings are somewhat similar to those noted six months ago. The hilar shadows are somewhat enlarged and a certain amount of increased mottling extends from them upwards, outwards but principally downwards into the lung tissue on both sides. In the present plate, however, the left hilar shadow appears to be smaller in size and the degree of calcification noted here to be greater than was noted in September, last.

Lateral views show a similar definite decrease in the overall size of the hilar shadow and a very definite increase in the amount of calcification present in this region.'

In August the child had bronchitis for two weeks.

At Two Years (September, 1946)

(10 years 6 months)

Height and Weight. 52.50 inches (increase of 0.75 inch).
50 pounds (gain of 2 pounds).

Physical Examination of Chest. Enlargement of anterior superficial veins not noted. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the seventh cervical spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 48 e. 'The hilar shadows are moderately enlarged and show evidences of some calcification, this latter point being most marked on the left side. Both lungs show a slight increase of lung mottling, most marked in the lower halves.

When compared with plates taken in September, 1944 and March, 1945, there is evidence to show that the hilar shadows are diminished in size and that generally speaking, the amount of lung mottling present has decreased.

Lateral views of the chest show a definite degree of hilar adenitis which is associated with numerous small calcified nodules. There is a very slight degree of peaking of the diaphragm, indicating old pleuritic changes. When compared with plates taken in September, 1944 and March, 1946, the present plate shows that the hilar shadows are less marked and the degree of mottling round this region diminished in amount.'

CYRTOMETER TRACINGS

(one quarter natural size)

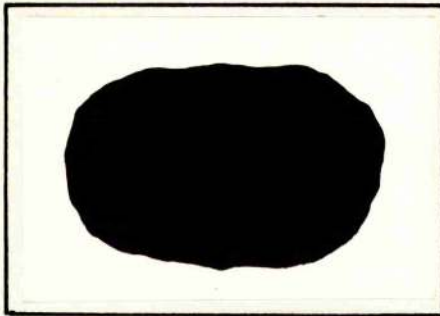


Fig. 48.

At First Examination.

A-P. diameter 5.00 inches.
L. diameter 7.50 inches.

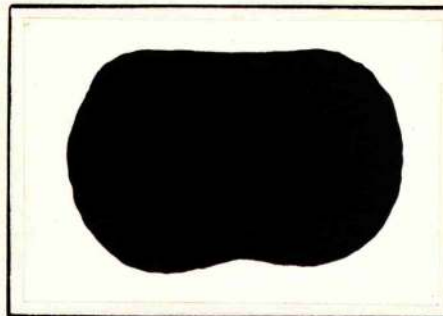


Fig. 48 a.

At Two Years.

A-P. diameter 5.00 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

21.50 inches.

23.00 inches.

(Female. 8 years 6 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Cotton
Vest	Wool	Knickers	Cotton
Bodice	Cotton		
Knickers	Wool		

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Jumper	Wool	Blouse	Cotton
Gym suit	Serge	Gym suit	Serge
Coat	Nap		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

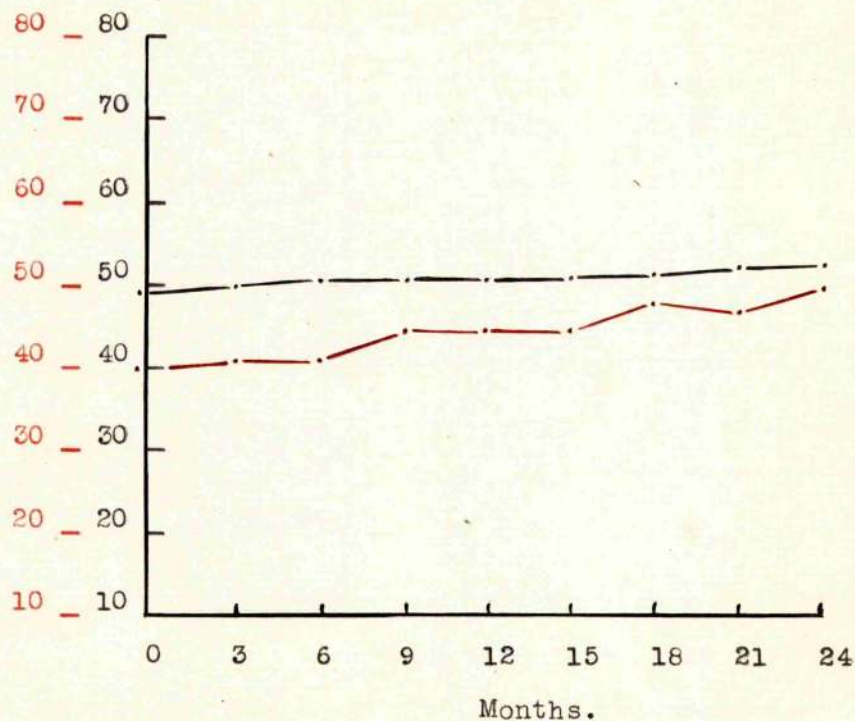
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



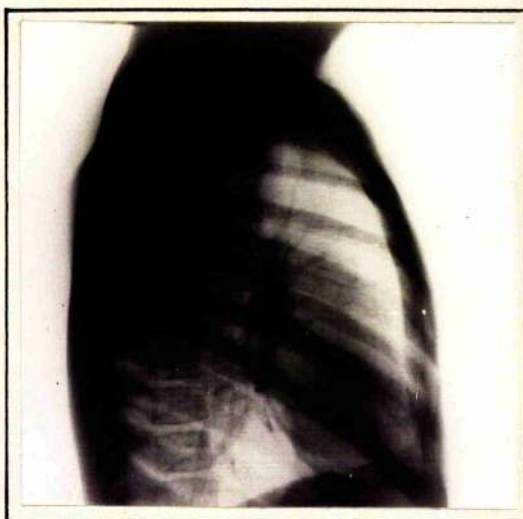
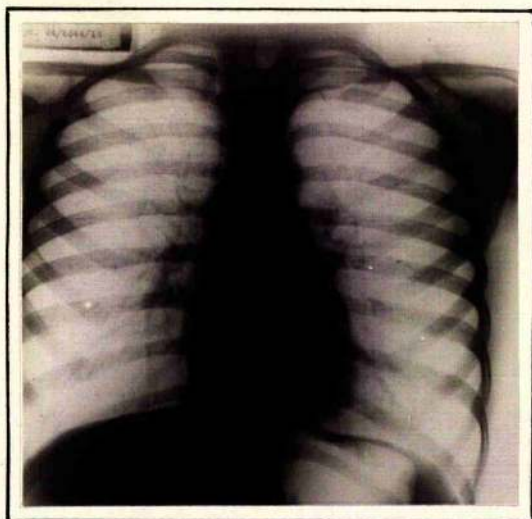


Plate 48. At First Examination.

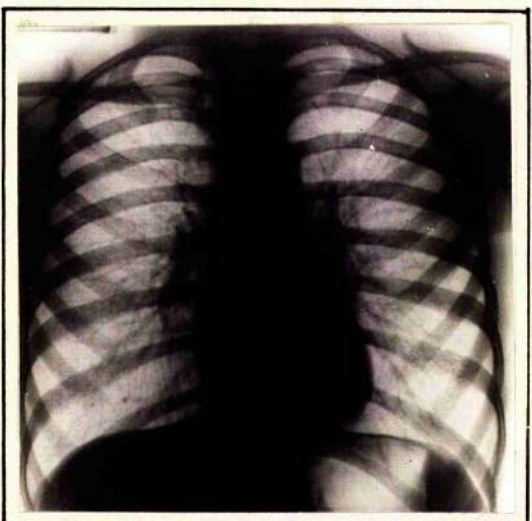


Plate 48 a. At Three Months.

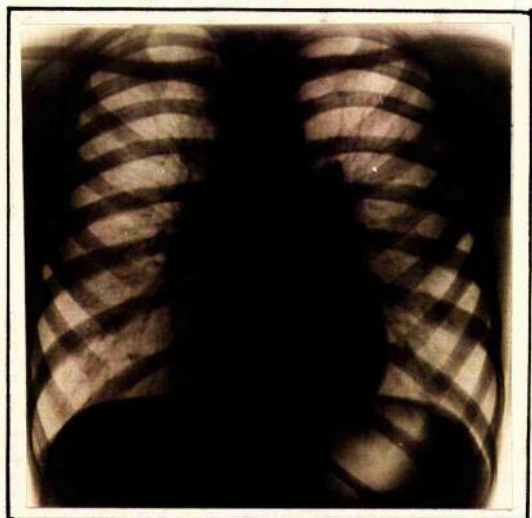


Plate 48 b. At Six Months.

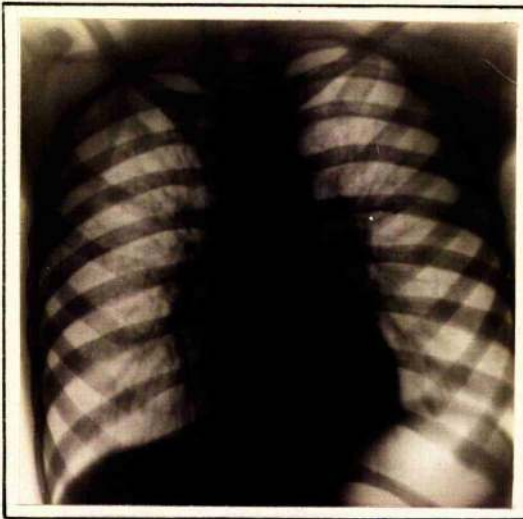


Plate 48 c. At One Year.

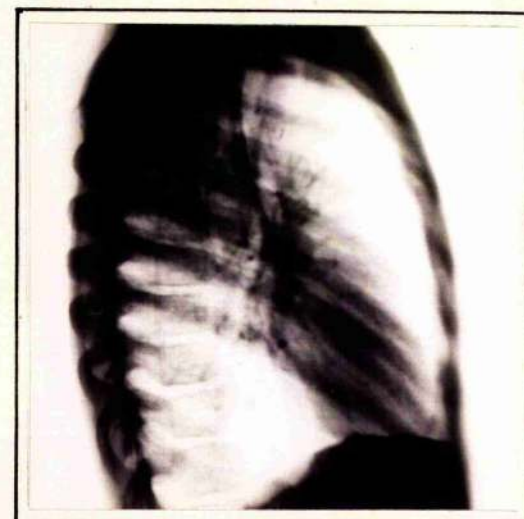
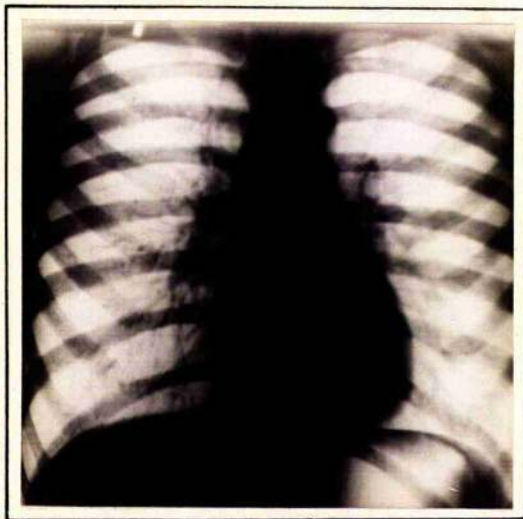


Plate 48 d. At Eighteen Months.

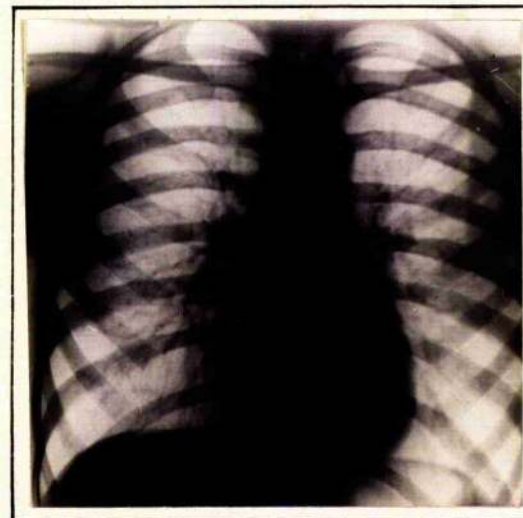


Plate 48 e. At Two Years.

Name. J.P. Sex. Male. Age. 11 years 3 months.

Date of Birth. 10/8/33.

Feeding. At breast for two weeks and thereafter fed on cow's milk (not boiled) when lactation stopped.

Family History. Parents are alive and well. Only child. No family history of tuberculosis.

Previous Illnesses

Measles	October, 1936.
Whooping cough	October, 1938.
Tonsillitis	September, 1939.
Mumps	February, 1941.

Since the child had measles in October, 1936 he has been subject to frequent bronchial colds with slight asthma, especially during the cold season. He had an attack two weeks ago.

Environment and Parental Care. The family resides in a five apartment house on the outskirts of a town. The bedroom windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

November, 1944.

(11 years 3 months)

Height and Weight. 51.25 inches. 54.5 pounds.

Mouth and Teeth. Tongue moist and clean. Four decayed teeth (5 and 5) in upper jaw and (4 and 5) in lower jaw. Remainder in good condition.

Teeth in upper jaw:	654321	123456
Teeth in lower jaw:	6-4321	123456
Total number of teeth:	23	

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids not enlarged.

Naso-faucial Flora. Mainly M. catarrhalis, staphylococci and streptococci.

Haematology.

Erythrocytes	5,210,000 per c.mm.
Leucocytes	11,733 per c.mm.
Haemoglobin 76 per cent.	Colour Index 0.73

Differential Leucocyte Count:-

Neutrophils	49.50 per cent.	(5,807 per c.mm.)
Eosinophils	13.75 per cent.	(1,613 per c.mm.)
Basophils	1.25 per cent.	(146 per c.mm.)
Lymphocytes	31.00 per cent.	(3,637 per c.mm.)
Monocytes	4.50 per cent.	(516 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	8	21	57	12	2

Physical Examination of Chest. Muscular development poor. Scapulae prominent. No spinal deformity. Circumference of

chest during quiet respiration 23.5 inches. Antero-posterior diameter 6 inches. Lateral diameter 7.5 inches. Skin texture fine. Marked enlargement of anterior superficial veins over upper part of chest. No enlarged glands. Slight dullness over upper part of sternum extending towards right clavicle. Breath sounds vesicular and harsh with scattered rhonchi throughout both sides of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. Spasmodic dry cough after going to bed and in the early morning.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 49. 'Chest well formed and symmetrical. Heart shadow normal in size.

Right lung: A diffuse root shadow with a large glandular mass in central bronchial area; a generalised increase in lung striation.

Left lung: Enlargement of tracheo-bronchial and upper bronchial glands; generalised increase of lung striation.

Lateral view shows lung striation increased into all lobes. A large mass of enlarged glands centrally and smaller glands present, particularly along bronchioles into basal areas.'

SUBSEQUENT EXAMINATIONS

At Three Months (February, 1945)

(11 years 6 months)

Height and Weight. 51.75 inches (increase of 0.5 inch). 57 pounds (gain of 2.5 pounds).

Physical Examination of Chest. Anterior superficial veins less prominent. Slight dullness over upper part of sternum. Breath sounds vesicular and harsh, especially over right half of chest, both anteriorly and posteriorly. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 49 a. 'There is a decided improvement in both quantity and quality of the root shadow. The root shadows both right and left are less diffuse, and show less congestion. The glandular masses are smaller and much more defined in outline. This is particularly so in the right central hilar mass. One firm gland shows along right upper lobe bronchi, and a few smaller and more defined than before along right basal bronchi.

On the left the increased striation into upper lobe is now much less and the glands along it are firming.

Lateral view shows similar improvement.'

At Six Months (May, 1945)

(11 years 9 months)

Height and Weight. 52 inches (increase of 0.25 inch). 57 pounds (no gain).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are still prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent.

The child has had a cough for two weeks, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer patch test (bovine) was negative. Vollmer (human) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 49 b. 'There is this time a slight but definite increase in the amount of the root shadows and in the extent of lung striation. The glands, however, remain fairly well defined. A small node is noted in the third interspace right mid clavicular line, which might be a primary focus of tuberculosis. Lateral view confirms increase in root congestion.'

Since August the child has had a cough, especially in the early morning.

At One Year (November, 1945)

(12 years 3 months)

Height and Weight. 52.75 inches (increase of 0.75 inch). 59 pounds (gain of 2 pounds).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are still prominent. Slight dullness over first dorsal vertebrae. A few scattered rhonchi throughout left side of chest. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 49 c. 'Slight increase in root congestion generally as compared with six months ago. Lateral view confirms this.'

In January the child had scarlet fever.

At Eighteen Months (May, 1946)

(12 years 9 months)

Height and Weight. 53.25 inches (increase of 0.5 inch). 62 pounds (gain of 3 pounds).

Physical Examination of Chest. The anterior superficial veins over upper part of chest are prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough after running.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 49 d. 'Definite reduction in extent of root shadow generally and particularly in extension along right basal bronchi. Marked firming of glands along left upper lobe bronchus.'

At Two Years (March, 1946)

(13 years 3 months)

Height and Weight. 54 inches (increase of 0.75 inch).
61 pounds (loss of 1 pound).

Physical Examination of Chest. Anterior superficial veins over upper part of chest are prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sigh was absent. An occasional cough, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were positive.

Radiographic Findings

Plate 49 e. 'As compared with six months ago there is no change except in lateral view where slight improvement is noted.'

Compared with two years ago the root shadows are equally extensive but show much less congestion. They are all well defined; in particular the right mid bronchial glands are well formed and outlined and there is no evidence of adenitis or periadenitis. Some calcification is noted in the left upper bronchial group of glands.

There is still some increase in the normal lung striation but much less than two years ago.

Lateral view shows marked clearing of peribronchial congestion.'

CYRTOMETER TRACINGS

(one quarter natural size)

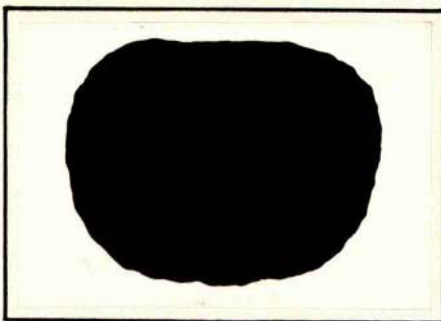


Fig. 49.

At First Examination

A-P. diameter 6.00 inches.
L. diameter 7.50 inches.

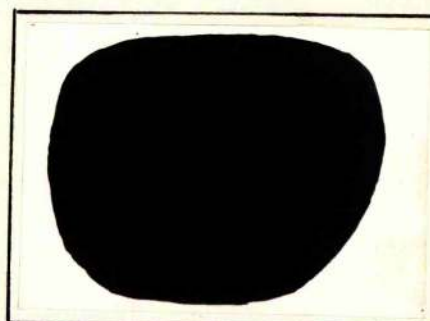


Fig. 49 a.

At Two Years

A-P. diameter 6.50 inches.
L. diameter 8.00 inches.

Circumference of Chest During Quiet Respiration

23.50 inches.

26.00 inches.

(Male. 11 years 3 months)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Wool	Vest	Wool
Pants	Wool	Pants	Wool

Shoes and stockings.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Shirt	Cotton	Shirt	Cotton
Pullover	Wool	Trousers	Flannel
Trousers	Flannel		
Coat	Tweed		
Scarf	Wool		

Cap.

Cap.

Overclothed:

No.

Constriction of chest due to clothing:

None.

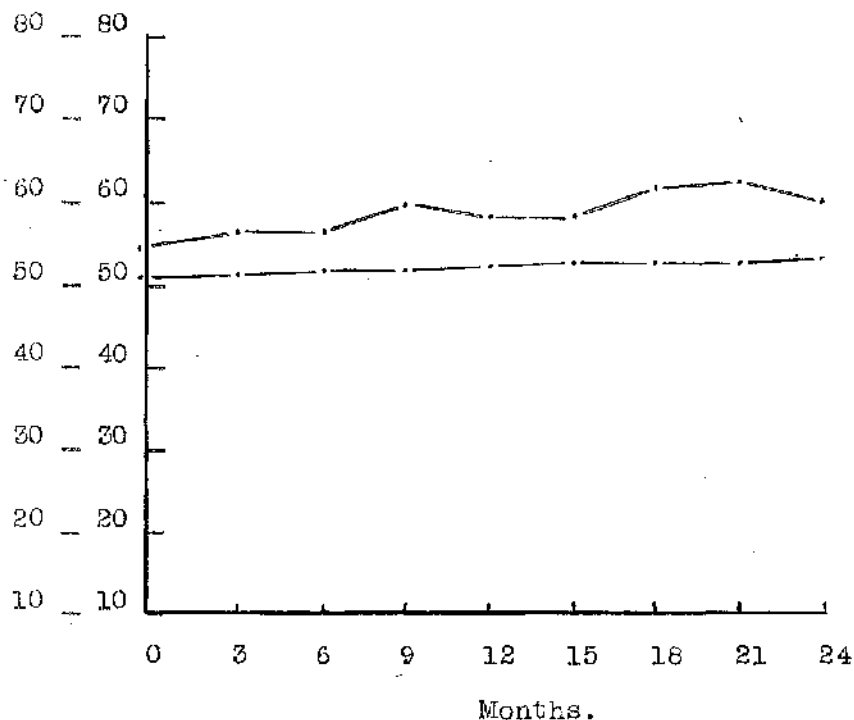
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



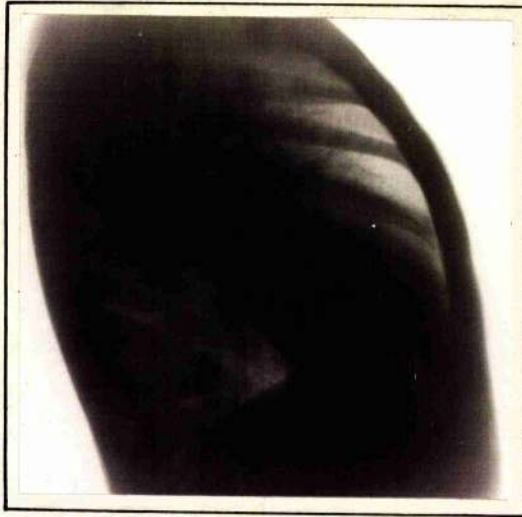
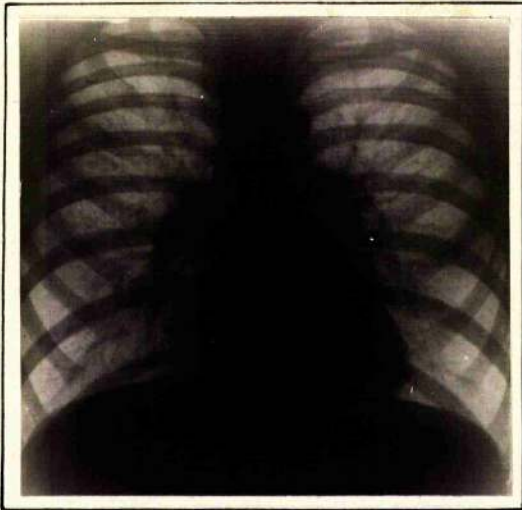


Plate 49. At First Examination.

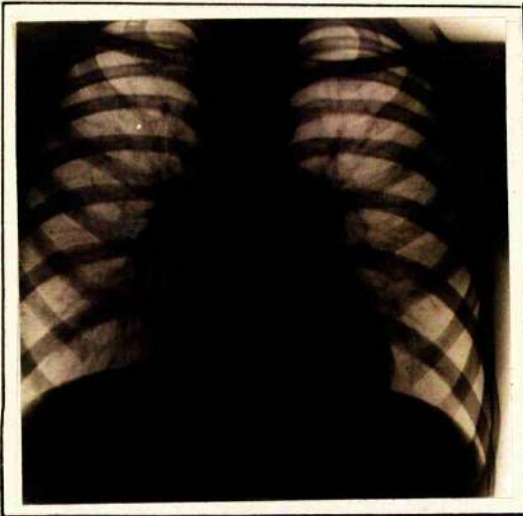


Plate 49 a. At Three Months.

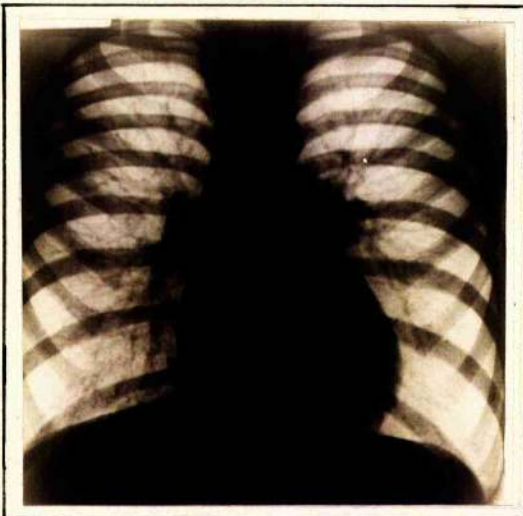


Plate 49 b. At Six Months.

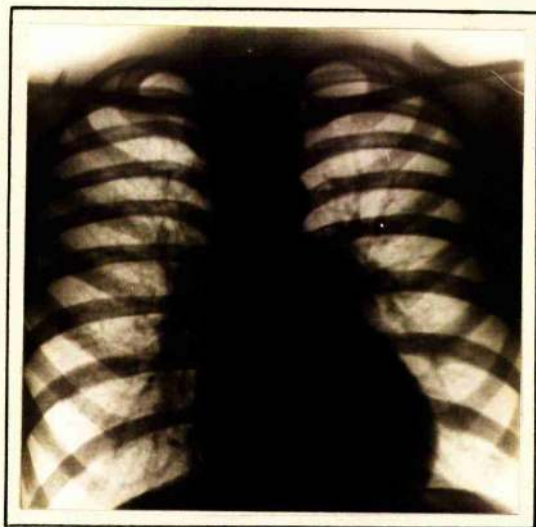


Plate 49 c. At One Year.



Plate 49 d. At Eighteen Months.

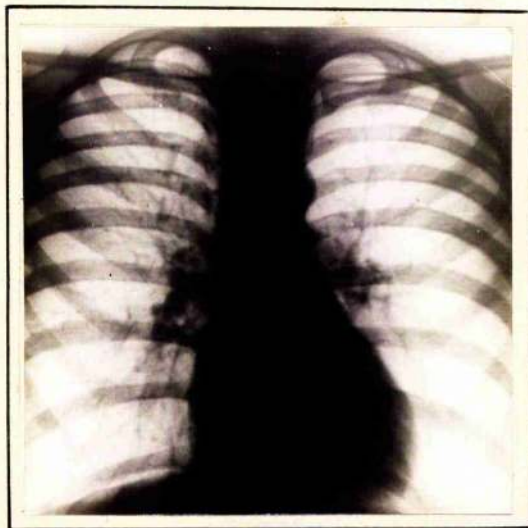


Plate 49 e. At Two Years.

Name. M.L. Sex. Female. Age. 6 years.

Date of Birth. 30/10/38.

Feeding. At breast for three months and thereafter fed on Sister Laura's Food when lactation stopped.

Family History. Parents are alive and well. Only child.
No family history of tuberculosis.

Previous Illnesses

Whooping cough August, 1940.
Measles March, 1944.

Since the child had measles in March, 1944 she has suffered from bronchitis and asthma. Her first attack followed six weeks after she had measles and subsequent attacks occurred in June, August and October. On each occasion the cough lasted for two weeks and she was confined to bed for a week to ten days.

Environment and Parental Care. The family resides in a room and kitchen tenement house in the centre of a town. The windows are kept open at night. The child is well cared for.

CONDITION AT INITIAL SYSTEMIC EXAMINATION

November, 1944.

(6 years)

Height and Weight. 41.5 inches. 38 pounds.

Mouth and Teeth. Tongue moist and clean. Decayed teeth have been extracted. Remainder in good condition.

Teeth in upper jaw: 321 123
Teeth in lower jaw: 321 123-5
Total number of teeth: 13

Ear, Nose and Throat. Ears healthy. No nasal discharge. Tonsils and adenoids removed in October, 1941.

Naso-faucial Flora. Mainly *M. catarrhalis* and staphylococci (*aureus*).

Haematology.

Erythrocytes 4,840,000 per c.mm.
Leucocytes 11,288 per c.mm.
Haemoglobin 82 per cent. Colour Index 0.85

Differential Leucocyte Count:-

Neutrophils 31.00 per cent. (3,499 per c.mm.)
Eosinophils 17.75 per cent. (1,903 per c.mm.)
Basophils 0.75 per cent. (84 per c.mm.)
Lymphocytes 48.25 per cent. (5,446 per c.mm.)
Monocytes 2.25 per cent. (253 per c.mm.)

Arneth Count (Cooke):-

Class	1	2	3	4	5
Per cent.	9	30	54	7	0

Physical Examination of Chest. Muscular development good. Scapulae prominent. No spinal deformity. Circumference of chest during quiet respiration 21 inches. Antero-posterior

diameter 5 inches. Lateral diameter 6.5 inches. Skin texture fine. Anterior superficial veins over upper part of right shoulder and neck prominent. No enlarged glands. Percussion note clear. Breath sounds vesicular. No adventitious sounds heard. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent. An occasional cough.

Bacteriological Examination of Sputum. A mixed flora including diphtheroids. No tubercle bacilli were seen.

Tuberculin Skin Test. Vollmer patch test (human and bovine) was negative.

Heart. No enlargement. Sounds regular and pure.

Radiographic Findings

Plate 50. 'Broad well made chest, regular and symmetrical. Heart shadow within normal limits.

Right lung: Right root shadow not markedly enlarged, though a few small glands are visible in tracheo-bronchial angle. There is some slight increase of basal striation.

Left lung: The left lung shows numerous small glands arranged in an arc just outwith the root shadow. There is a group of these along the left upper lobe bronchi where there is also a slight increase of lung striation.

Lateral view shows small tracheo-bronchial glands with some increased marking of upper lobe bronchi and similarly with posterior basal zone along whose bronchi small glands are visible.'

SUBSEQUENT EXAMINATIONS

In January, the child had bronchitis and was in bed for two weeks.

At Three Months (February, 1945)

(6 years 3 months)

Height and Weight. 42.5 inches (increase of 1 inch).
38 pounds (no gain).

Physical Examination of Chest. Anterior superficial veins over upper part of right shoulder and neck prominent. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent. No cough.

Radiographic Findings

Plate 50 a. 'The right root shadow is more pronounced than in previous film and there is also an increased congestion around the basal bronchi on the right side.

Lateral view shows heavier root shadow generally.'

At Six Months (May, 1945)

(6 years 6 months)

Height and Weight. 43 inches (increase of 0.5 inch).
40 pounds (gain of 2 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over upper part of right shoulder and neck less. On percussion and auscultation no abnormality was detected.

D'Espine's sign: The tracheal quality of the pectoriloquy extended to the fourth dorsal spine. Eustace Smith's sign was absent.

The child has had a cough for the past week, especially after lying down in bed at night.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 50 b. 'The root shadow remains diffuse and gland masses show little improvement. Generalised increase in lung striation remains.

Lateral view shows little change.'

In June the child had bronchitis with asthma and was in bed for a week. In September she had a further attack and was in bed for ten days. Since then the cough has continued, especially after lying down in bed at night.

At One Year (November, 1945)

(7 years)

Height and Weight. 44 inches (increase of 1 inch).
43 pounds (gain of 3 pounds).

Physical Examination of Chest. Slight prominence of anterior superficial veins over upper part of chest. On percussion no abnormality was detected. A few scattered rhonchi throughout chest, especially on right side. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 50 c. 'There is much more root congestion and increase of lung striation than there was one year ago, and this has even increased in the last six months. The glands previously beginning to firm are now fuzzy in outline and the whole picture is one of a generalised congestive process.'

In February the child had a cough for a week, especially after lying down in bed at night.

At Eighteen Months (May, 1946)

(7 years 6 months)

Height and Weight. 45 inches (increase of 1 inch).
45 pounds (gain of 2 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over upper part of chest. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the third dorsal spine. Eustace Smith's sign was absent.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 50 d. 'Slight reduction in root congestion with diminution in extent of root shadow. The right root shows a general improvement. On the left the glands along left upper lobe bronchus are much smaller and more defined.'

Lateral view shows details of root shadows clearer and more defined.'

At Two Years (November, 1946)

(8 years)

Height and Weight. 46 inches (increase of 1 inch).
47 pounds (gain of 2 pounds).

Physical Examination of Chest. Prominence of anterior superficial veins over upper part of chest, especially on right side. On percussion and auscultation no abnormality was detected. D'Espine's sign: The tracheal quality of the pectoriloquy extended to the second dorsal spine. Eustace Smith's sign was absent. No cough.

Tuberculin Skin Tests. Vollmer (human and bovine) and tuberculin jelly patch tests were negative.

Radiographic Findings

Plate 50 e. 'As compared with six months ago there is more congestion.'

As compared with two years ago there is now more evidence of congestion around the root structures on the right side. On the left side, however, the gland masses are firmer and those along the left upper lobe bronchus show signs of calcification.'

CYRTOMETER TRACINGS

(one quarter natural size)

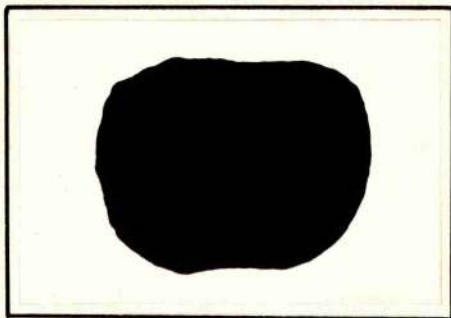


Fig. 50.

At First Examination

A-P. diameter 5.00 inches. L. diameter 6.50 inches.

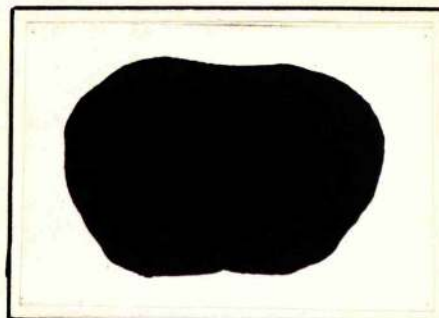


Fig. 50 a.

At Two Years

A-P. diameter 5.00 inches. L. diameter 7.50 inches.

Circumference of Chest During Quiet Respiration

21 inches.

23 inches.

(Female. 6 years)

Underclothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Vest	Cotton	Vest	Cotton
Bodice	Cotton	Bodice	Cotton
Knickers	Cotton	Knickers	Cotton

Shoes and socks.

Shoes and socks.

Outer clothing

WINTER		SUMMER	
Type of Garment	Fabric	Type of Garment	Fabric
Skirt with bodice	Wool	Frock	Cotton
Jumper	Cotton		
Coat	Wool		
	Tweed		

Hat.

No hat.

Overclothed:

No.

Constriction of chest due to clothing:

None.

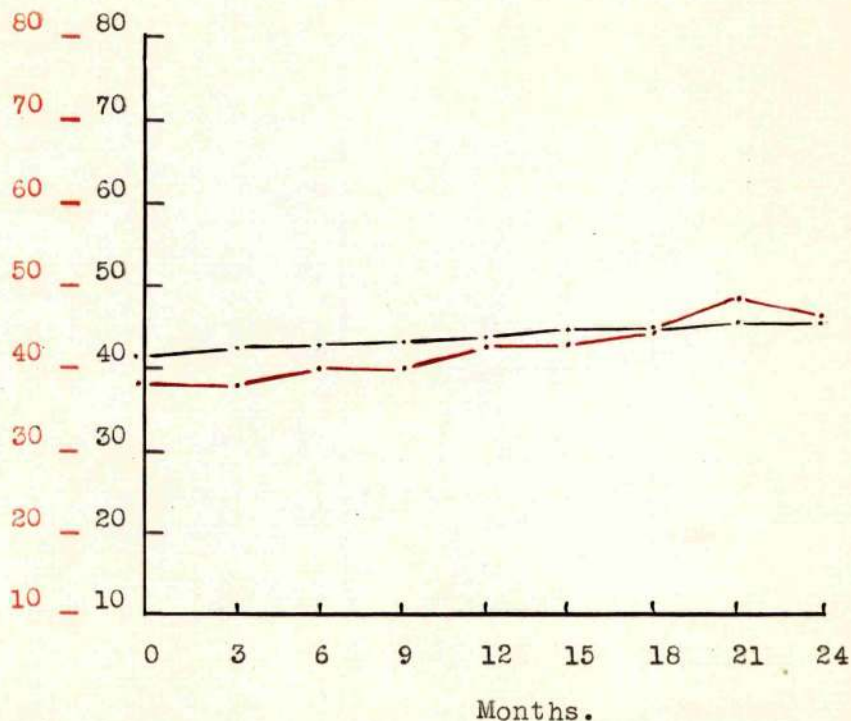
Interference with circulation due to clothing:

None.

Graph of Height and Weight at Intervals of Three Months

Height in inches.

Weight in pounds.



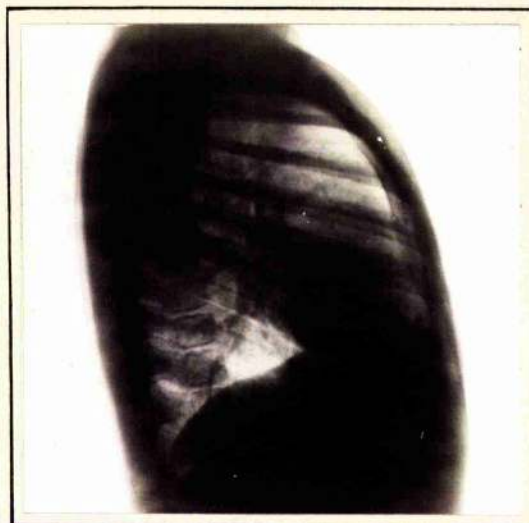
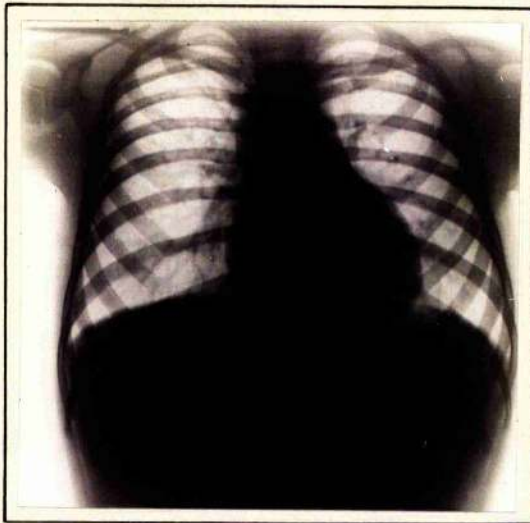


Plate 50. At First Examination.

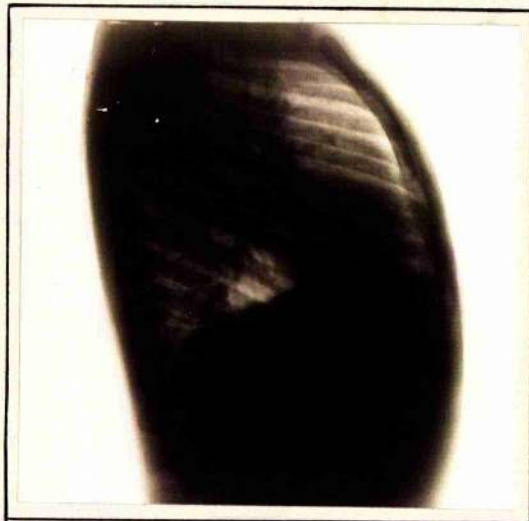
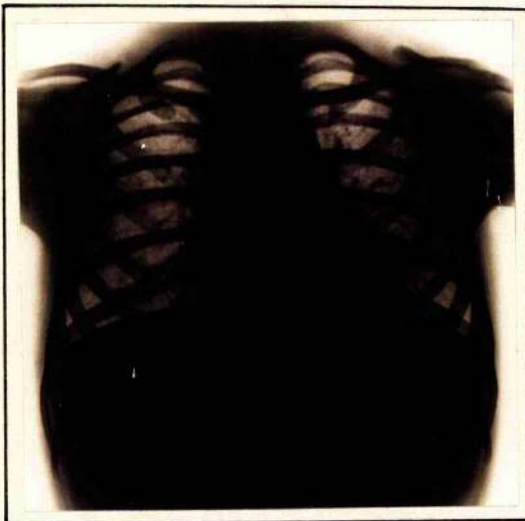


Plate 50 a. At Three Months.

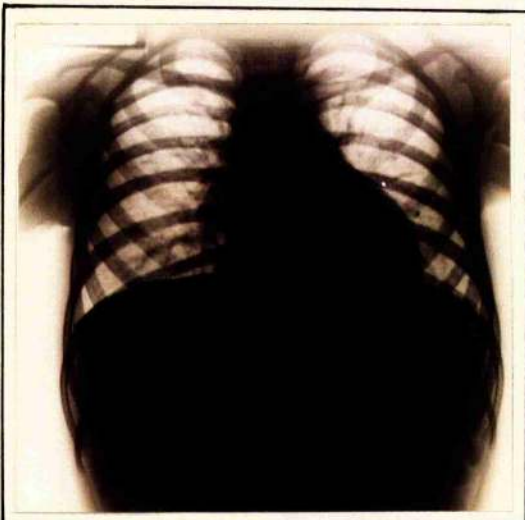


Plate 50 b. At Six Months.

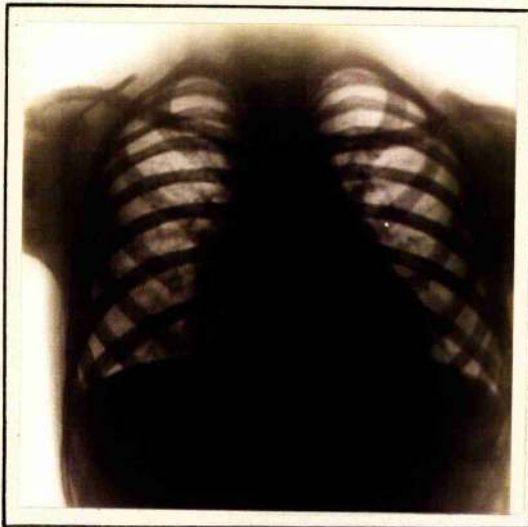


Plate 50 c. At One Year.

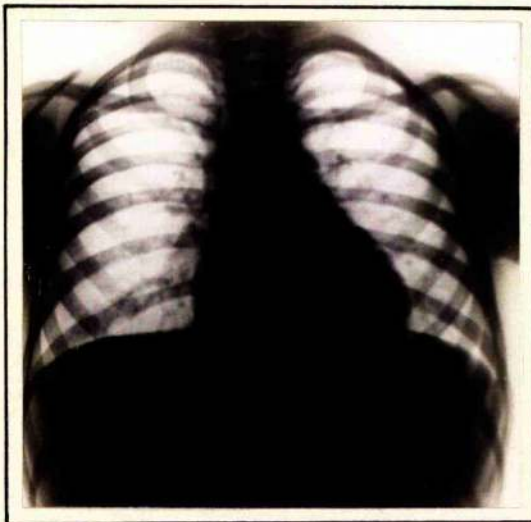


Plate 50 d. At Eighteen Months.

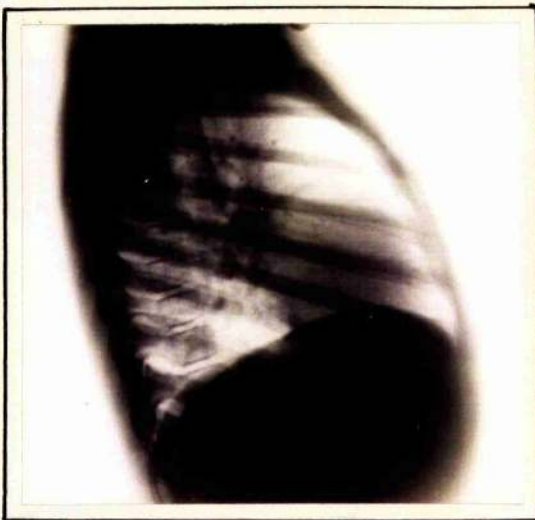
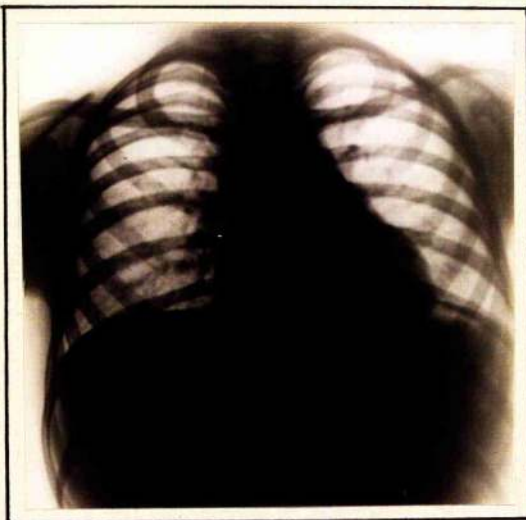


Plate 50 e. At Two Years.

Fifty cases have been investigated, and each has been followed-up for a period of two years. The children came from good working class and middle class homes. At the time of the initial examination the oldest child was eleven years and three months and the youngest one year and three months. The average age was five years. For convenience, the patients were arranged in three groups, and those children who had suffered either from measles or whooping cough at some previous date - approximately within the previous four years - were included in Group III. The number in each group and the proportion of males to females was as stated in Table A.

TABLE A.
GROUPING OF CASES IN STUDY

	Number	Males	Females
Group I. Whooping cough convalescents	31	18	13
Group II. Measles convalescents	11	5	6
Group III. Winter Cough Cases	8	4	4
Total	50	27	23

Family History.

A family history of tuberculosis was obtained in six instances. In four of these the disease was pulmonary and three of the children showed a positive tuberculin skin reaction. In two it was non-pulmonary and the tuberculin skin reaction was negative in both.

Environment and Parental Care.

Forty five cases lived under urban and five under rural conditions. Bedroom windows were kept open at night in thirty eight cases and closed in twelve. The cases were well cared

for with four exceptions, all of whom belonged to the same family.

Height and Weight.

The average increase in height over the first year of the investigation was 2.50 inches and over the second year 2.33 inches. The average gain in weight over the first year was 5.20 pounds. One case showed no gain, and one a loss of weight. Over the second year the average gain was 4.87 pounds.

Teeth.

Complete dentition and in good condition	23 cases.
Incomplete but in good condition	13 cases.
Decayed	14 cases.

Ear, Nose and Throat.

In healthy condition	25 cases.
Enlarged tonsils and adenoids	21 cases.
Nasal discharge with enlarged tonsils and adenoids	3 cases.
Otorrhoea with enlarged tonsils and adenoids	1 case.

Naso-faucial Flora.

Nasal swabs and throat swabs were cultured on blood agar and Löffler's serum and after incubation were stained by Gram's method. Attention was given to the appearance of the growth, and the occurrence of haemolysis on the blood agar plates. The flora consisted mainly of *M. catarrhalis*, pneumococci, diphtheroids, coliform bacilli, staphylococci (12 cases showed the presence of *Staphylococcus aureus*) and streptococci (11 cases showed the presence of haemolytic strains).

Haematology.

Average erythrocyte count	5,110,060 per c.mm.
Average leucocyte count:-	
Whooping cough convalescents	13,014 per c.mm.
Measles convalescents	11,150 per c.mm.
Winter cough cases	11,653 per c.mm.
Average haemoglobin 84 per cent. Average Colour Index 0.83	

Differential leucocyte count:-

	<u>Whooping</u> <u>cough</u> <u>convalescents</u>	<u>Measles</u> <u>convalescents</u>	<u>Winter</u> <u>cough</u> <u>cases</u>
Neutrophils	42.25 per cent.	55.50 per cent.	56.50 per cent.
Eosinophils	4.75 per cent.	4.00 per cent.	2.50 per cent.
Basophils	0.50 per cent.	0.50 per cent.	0.50 per cent.
Lymphocytes	48.75 per cent.	35.75 per cent.	36.50 per cent.
Monocytes	3.75 per cent.	4.25 per cent.	4.00 per cent.

The Arneth Count showed a shift to the left in 36 cases.

Adenitis.

Enlarged cervical glands were present in three cases.

Physical Examination of Chest.

At the initial examination twenty one cases showed good, twelve cases moderate, and seventeen cases poor muscular development. Spinal deformity was noted in one case. The average circumference of the chest during quiet respiration was 21.12 inches and the average increase after two years was 1.64 inches. The average antero-posterior diameter of the chest was 5.16 inches, showing an average increase of 0.24 inch after two years. The average lateral diameter was 7.08 inches and the average increase after two years was 0.52 inch.

The number of cases showing prominence of the anterior superficial veins over the upper part of the chest compared with improvement in the bronchial adenopathy will be found stated in Table B. Those in which impairment of the percussion note was obtained over the anterior and upper part of the chest, the upper part of the sternum, the first and second dorsal vertebrae or interscapular area are detailed in Table C. The cases in which adventitious sounds were heard are listed in Table D.

TABLE B.

NUMBER OF CASES SHOWING PROMINENCE OF ANTERIOR SUPERFICIAL VEINS
OVER UPPER PART OF CHEST AND IMPROVEMENT IN ADENOPATHY

	<u>Prominent anterior superficial veins</u>	<u>No enlargement</u>
At Initial Examination	23	27
At Three Months	24	26
At Six Months	21	29
At One Year	20	30
At Eighteen Months	18	32
At Two Years	17	33
	<u>Bronchial Adenopathy</u>	
	<u>Improvement in</u>	<u>Improvement in</u>
At Three Months	13	15
At Six Months	14	13
At One Year	7	16
At Eighteen Months	7	22
At Two Years	5	14

TABLE C.

NUMBER OF CASES WITH IMPAIRMENT OF PERCUSSION NOTE OVER
ANTERIOR AND UPPER PART OF CHEST - UPPER PART OF STERNUM -
FIRST AND SECOND DORSAL VERTEBRAE OR INTERSCAPULAR AREA

	<u>Upper chest</u>	<u>Upper sternum</u>	<u>1st & 2nd dorsal vertebrae</u>	<u>Inter- scapular</u>	<u>No abnor- mality</u>
At Initial Examination	1	2	7	1	39
At Three Months	0	5	2	1	42
At Six Months	0	2	0	3	45
At One Year	1	2	2	3	42
At Eighteen Months	0	1	2	1	46
At Two Years	0	0	1	0	49

TABLE D.

NUMBER OF CASES IN WHICH ADVENTITIOUS SOUNDS WERE HEARD

	<u>Râles and Rhonchi</u>	<u>No adventitious sounds</u>
At Initial Examination	8	42
At Three Months	6	44
At Six Months	4	46
At One Year	6	44
At Eighteen Months	2	48
At Two Years	3	47

Both d'Espine's and Eustace Smith's signs received special consideration. The number of cases in which d'Espine's sign was obtained, and the extent to which the tracheal quality of the pectoriloquy extended, is shown in Table E. By means of colours it is possible to trace each group and the subsequent changes at each examination. It will be noted that as the adenopathy improved more cases moved into groups A. B. and C.

Eustace Smith's sign was elicited only on ten occasions during the two years. It was not present in any case at the initial examination. At three months it was obtained in one case, at six months in two, at one year in two, at eighteen months in three and at two years in two cases.

Radiographic Findings.

For convenience of the summary, the fifty cases have been divided into five groups and the findings are recorded in Table F. Colours have been used in a similar manner as in Table E. A larger number of cases showed evidence of calcification at the final examination. Eighteen cases showed well-marked calcification at the end of two years, as compared with only three at the initial investigation. This can be seen from the table as more cases move into Group D.

Bacteriological Examination of Sputum.

Specimens of sputum were obtained in seventeen cases. Bacteriological investigation was carried out in a similar manner to that for the nose and throat swabs, but in addition were examined for tubercle bacilli. The average findings

showed a mixed flora including pneumococci, diphtheroids and Gram-positive cocci. No tubercle bacilli were seen in any of the sputa examined.

Tuberculin Skin Tests.

A graph of the cases showing a positive tuberculin reaction will be found on page 375. A steady rise was noted up to eighteen months after the date of the initial examination. By the end of two years almost fifty per cent. of the cases showed a positive reaction. Although the tuberculin diagnostic jelly was not used till six months, it appeared to be more sensitive than the Vollmer patch test. Paterson, (20) also found this in a series of tests which he carried out.

Heart.

Slight mitral lesions were noted in four cases.

Clothing.













































































































The seasonal outfit of each child was charted and will be found with its case record. Three cases were overclothed, but none showed constriction of the chest or interference with circulation due to clothing.

Cough.

Cough is a common symptom of any bronchial affection, but in this present series I would draw attention to the fact that the cough - excluding acute respiratory infections - was most marked after the child lay down in bed at night. The incidence of cough, especially after lying down in bed at night compared with other illnesses during the two years of the investigation is shown in a diagram on page 376.

TABLE E.

Showing in colour, the fifty cases divided into groups and also the number in each group, according to the level to which the tracheal quality of the pectoriloquy extended at the initial examination. Original colours remain constant throughout. Each small square corresponds to a rectangle in column two. As the small squares move up or down at the subsequent examinations, so the condition of the patients has improved or worsened in relation to d'Espine's sign.

Group	Initial exam.	At 3 months	At 6 months	At 12 months	At 18 months	At 24 months
A	0 Case 				  	   1 2 1 1 1 5
B	4 Cases 	   	  	  	   	   1 3 6 1 1 3 6 1 1 3 6 1 2 1 9
C	11 Cases 	    1 7 1 2	    3 6 1 2 2	    3 1 3 2 1 2	    2 2 1 1 1 4	    1 2 3 1 2 2
D	1 Case 					
E	4 Cases 	    1 2 3 3 1 1	    2 1 2 1 1 2	    2 1 1 1 1 5	    1 1 1 1	  1
F	4 Cases 	   1 1 1	    1 1 1 1 1 1	    1 3 1 1	  1 2	 1
G	2 Cases 	    1 1 1 1	    1 1 1 1 1 1	    1 3 1 1	 2	
H	1 Case 			 1	 1	
I	1 Case 					
J	22 Cases 	  1 19	 16	 11	 9	 5
Total	50 Cases	50 Cases	50 Cases	50 Cases	50 Cases	50 Cases

Group A. Not present (7th. cervical spine).

Group B. First dorsal spine.

Group C. Second dorsal spine.

Group D. Second dorsal spine with dullness over first and second dorsal spines.

Group E. Third dorsal spine.

Group F. Third dorsal spine with dullness over first and second dorsal spines.

Group G. Fourth dorsal spine.














































Group H. Fourth dorsal spine with dullness over first and second dorsal spines.

Group I. Fourth dorsal spine with dullness over first and second dorsal spines and bronchial breathing to same level.

Group J. Not elicited through non-co-operation of patient.

TABLE F.

Showing in colour, the fifty cases divided into groups and also the number in each group at the initial examination. Original colours remain constant throughout. Each small square corresponds to a rectangle in column two. As the small squares move up or down at the subsequent examinations, so the condition of the patients has altered in relation to the radiographic findings.

Group	Initial exam.	At 3 months	At 6 months	At 12 months	At 18 months	At 24 months
A	6 Cases 	4 	2 	1 		
B	39 Cases 	2  34 	3  34  1 	4  34  1 	5  31  1 	5  25  1 
C	1 Case 	2  1 	1  1 		1 	
D	3 Cases 	3  3 	4  3 	1  5  3 	1  7  3 	1  13  3 
E	1 Case 	1 	1 	1 	1 	1 
Total	50 Cases	50 Cases	50 Cases	50 Cases	50 Cases	50 Cases

Group A. Increased root shadows.

Group B. Bronchial adenopathy.

Group C. Bronchial adenopathy with possible primary tuberculous focus.

Group D. Bronchial adenopathy with calcification.

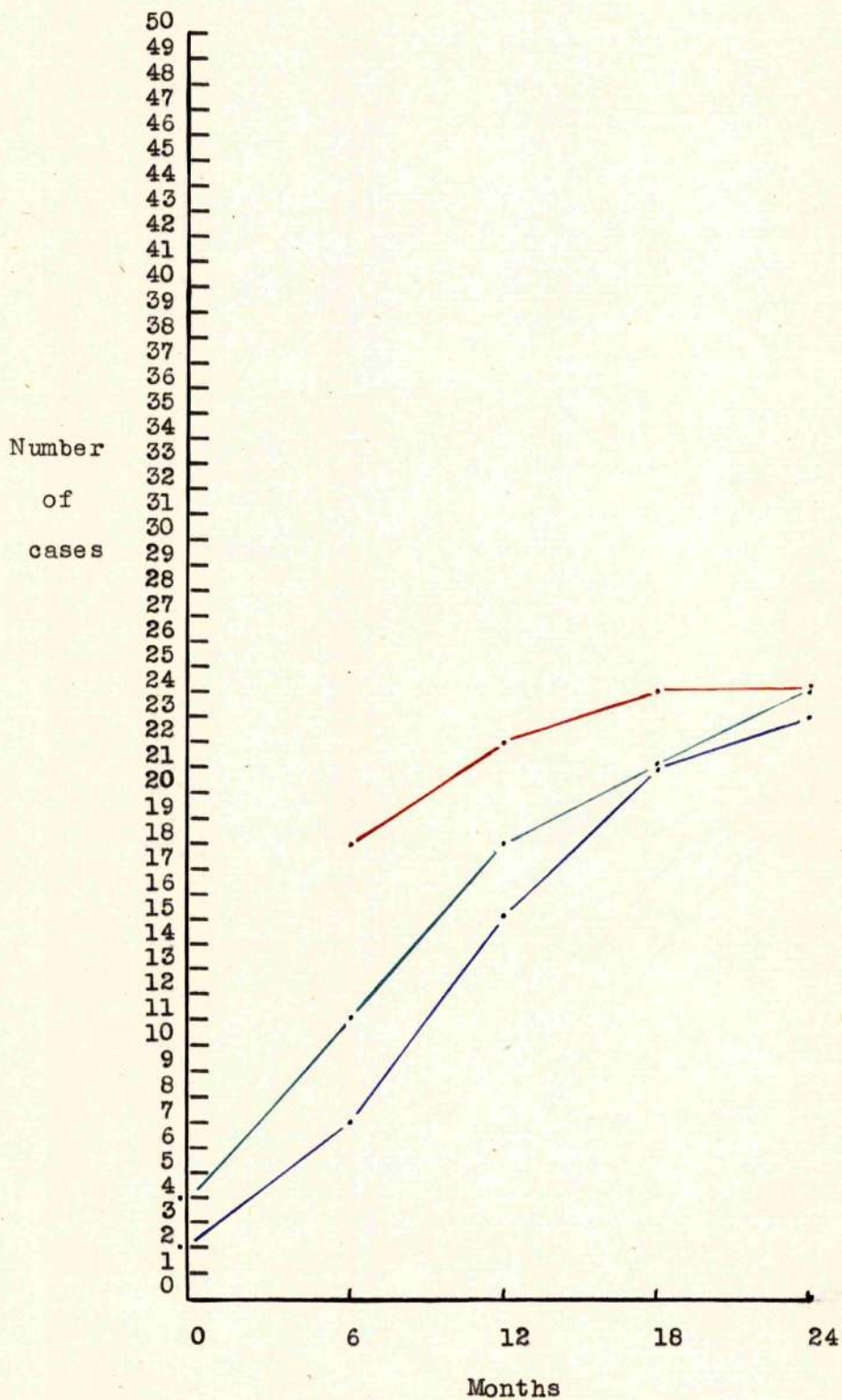
Group E. Bronchial adenopathy with possible primary tuberculous focus and calcification.

NUMBER OF CASES SHOWING A POSITIVE REACTION TO
TUBERCULIN SKIN TESTS AT INTERVALS OF SIX MONTHS

Vollmer patch test (human)

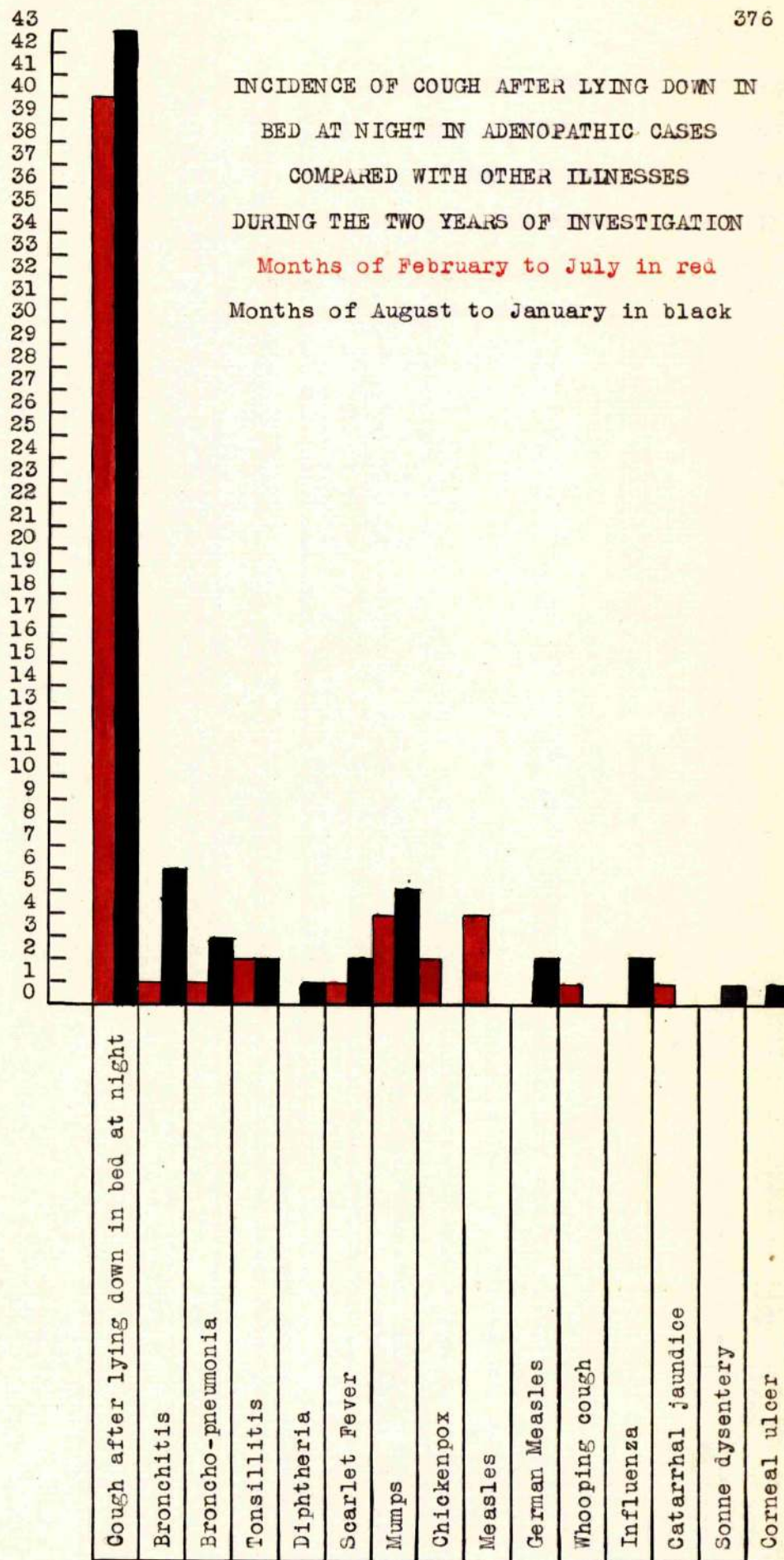
Vollmer patch test (bovine)

Tuberculin diagnostic jelly



INCIDENCE OF COUGH AFTER LYING DOWN IN
BED AT NIGHT IN ADENOPATHIC CASES
COMPARED WITH OTHER ILLNESSES
DURING THE TWO YEARS OF INVESTIGATION
Months of February to July in red
Months of August to January in black

Incidence



The conclusions which I have reached after a follow-up for two years and three hundred separate examinations are as follows:-

(1) Bronchial adenopathy is more or less a constant finding after measles and whooping cough and can be classed as a distinct clinical condition in childhood.

(2) The adenopathy may be extensive, and may involve all the glands, or may be limited to the hilar area, depending on the severity of the infection and on previous respiratory infections. As the infection subsides, the glands become smaller and firmer in appearance and many, especially after two years, show evidence of calcification. Others remain as diffuse and extensive at the end of two years as they were at the time of the initial examination. The incidence of tuberculous involvement appears to be between three months and eighteen months after the initial infection.

(3) The symptoms have often been described as vague and indefinite, but I have observed the frequency of cough, which tends to be more pronounced after the child lies down in bed at night. The cough is unproductive and occasionally has a paroxysmal character. I do not assert that this is always a symptom of bronchial adenopathy in every case, but I have nevertheless, been impressed by its repeated occurrence in my present series. The incidence of this is shown in the diagram on page 376. ⁽⁵⁾Gueneau de Mussy, drew attention to the whooping cough-like character of the cough in bronchial adenopathy and suggested it was due to the connection of the enlarged glands with the pneumogastric nerve. It may well be that this also serves to explain my observations noted above.

(4) Various physical signs have been described by other observers with whose works I have already dealt. I have found that most of the signs, although occasionally elicited, are not constant enough to be of any practical value. Two signs, however, I consider to be of value - prominence of the anterior superficial veins over the upper part of the chest and d'Espine's

sign. If both these are present, then I think it is strong evidence in support of the diagnosis, or at least that the bronchial glands are larger than they should be. Likewise as the glands become less congested, smaller and firmer and show evidence of calcification, the superficial veins appear less prominent and d'Espine's sign is no longer elicited so far down the dorsal spines.

(5) It is important when examining for d'Espine's sign to use a stethoscope with a small bell chest piece which fits over the spinous processes.

(6) Radiology helps in confirming the findings and should include a lateral as well as a postero-anterior view, in order to reveal enlarged glands around the bifurcation of the trachea - a position that in a postero-anterior view may be obscured by the cardiac shadow.

(7) The tuberculin skin tests are important adjuncts to the clinical examination. The Tuberculin Diagnostic Jelly prepared by Messrs. Allen and Hanburys Ltd. appears to be a more accurate method of performing the skin test than the Vollmer patch test, and for the general practitioner, is a simple and accurate test for routine use.

(8) The diagnosis must be made by a combined consideration of the history, physical signs and x-ray interpretations.

(9) The most important question for differential diagnosis is the possible presence of tuberculosis, the presence of which can be suspected by the use of tuberculin skin tests.

In preparing this thesis I have been under special obligation to the Staff of the Russell Institute, Paisley, for taking the skiagrams; to Dr. H. W. O. Frew, Tuberculosis Officer of the County of Renfrew, for the radiological reports on cases 26, 27, 28, 29, 31, 47 and 48, and to Dr. A. J. Campbell, Tuberculosis Officer of the Burgh of Paisley, for the remainder.

I am indebted, also, to Miss Campbell and Mr. Graham for assisting me in developing, printing and mounting the photographs; to the Directors of the Royal Alexandra Infirmary, Paisley, for placing at my disposal the pathological department, which enabled me personally to carry out the necessary laboratory investigations.

Not least I am deeply indebted to those of my patients and their children whose willing co-operation made the survey possible.

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